

Report to the Legislature

Sunrise Review Anesthesiologist Assistant

December 2021



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Contents

| | |
|---|-------|
| Executive Summary..... | 1 |
| Summary of Information..... | 2 |
| Legislative Request..... | 2 |
| Background..... | 2 |
| Summary of Applicant Report..... | 4 |
| Educational Programs..... | 6 |
| Other States..... | 8 |
| Stakeholder Engagement..... | 10 |
| Review of Proposal Using Sunrise Criteria..... | 19 |
| Detailed Recommendations..... | 21 |
| Appendices | |
| Appendix A: Request from Legislature..... | A-1 |
| Appendix B: Draft Bill..... | A-2 |
| Appendix C: Applicant Report | A-20 |
| Appendix D: Comments on Applicant’s Proposal..... | A-345 |
| Appendix E: Summary of Educational Programs | A-440 |

Executive Summary

Representative Eileen Cody, chair of the House Health Care & Wellness Committee, requested the Department of Health (department) review a proposal under the sunrise law ([chapter 18.120 RCW](#)) to create a license for anesthesiologist assistants in Washington state. She asked us to assess whether it meets the criteria in RCW 18.120.010 for creating a new regulated health profession. The Washington State Society of Anesthesiologists is the applicant group¹ for this proposal.

Draft bill H-1421.1 (see Appendix B) would create a license for an anesthesiologist assistant to practice medicine to a limited extent under the supervision of an anesthesiologist. In consultation with a newly established advisory committee, the Washington Medical Commission (WMC) would regulate this profession and set the qualifications for licensure. The WMC would be required to consult with the Board of Osteopathic Medicine and Surgery when investigating allegations of unprofessional conduct against an anesthesiologist assistant who is supervised by an osteopathic physician anesthesiologist ([chapter 18.57 RCW](#)).

Anesthesiologist assistant education programs require a bachelor's degree that includes pre-med courses, followed by 24-28 months in an intense master's level program of didactic and clinical training. Anesthesiologist assistants are authorized to practice in 15 states as part of an Anesthesia Care Team (ACT) under the direction and supervision of a licensed anesthesiologist. Anesthesiologist assistants cannot currently work in Washington because the proposed scope of practice requires a health care license to perform.

The applicant group maintains this profession is a safe option to address gaps in, and increase access to, anesthesia care in Washington. Groups opposed to the proposal argue that Certified Registered Nurse Anesthetists (CRNA) are the best option to increase access to care.

Recommendation:

The department recommends in favor of the proposal if the following suggested changes are made to ensure patient safety. With the recommended changes, the proposal meets the sunrise criteria to demonstrate it protects the public from harm, ensures adequate education and training, and is the most cost-effective option for this credential.

The department recommends the following changes to the draft bill:

- Clarify the definition of supervision to ensure the supervising anesthesiologist is present during induction or emergence from general anesthesia and is readily available for emergencies.
- Narrow the scope of practice to match other states that license this profession.
- Replace the language in section four regarding the supervision ratio and instead require the commission to work with stakeholders to set the supervision ratio limitation.
- Remove the advisory committee in section three because the WMC already has mechanisms in place and the expertise to regulate this profession.

¹ Applicant group is defined in RCW 18.120.010 as including an individual or group, "which proposes that any health professional group not presently regulated be regulated or which proposes to substantially increase the scope of practice of the profession."

Summary of Information

Legislative Request

On May 13, 2021, Representative Cody, chair of the House Health Care & Wellness Committee, requested the department review a proposal under the sunrise law ([chapter 18.120 RCW](#)) to create a license for anesthesiologist assistants in Washington state. She asked us to assess whether it meets the criteria for creating a new regulated health profession (RCW 18.120.010). The Washington State Society of Anesthesiologists is the applicant group² for this proposal.

Draft bill H-1421.1 (see Appendix B) would create a license for an anesthesiologist assistant to practice medicine to a limited extent under the supervision of a WMC approved anesthesiologist or group of anesthesiologists. The WMC would regulate anesthesiologist assistants and set the qualifications for licensure to include completion of an anesthesiologist assistant program accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) and passage of an approved examination. The WMC would be required to consult with the Board of Osteopathic Medicine and Surgery when investigating allegations of unprofessional conduct against an anesthesiologist assistant who is supervised by an osteopathic physician anesthesiologist (chapter 18.57 RCW).

The draft bill would also create an anesthesiologist assistant advisory committee to review and make recommendations to the WMC on matters relating to anesthesiologist assistants.

Background

Anesthesia is the use of anesthetics to prevent pain during surgery and other procedures and cause a person to have a loss of feeling or awareness. Types of anesthesia include:

- Local anesthesia:
 - Administered through injection or absorbed through the skin.
 - Numbs a small part of the body while the patient remains awake and alert.
- Regional anesthesia:
 - Administered by spinal injection via a single dose of anesthetic that is injected into the lower back below the end of the spinal cord. Or epidural, an anesthetic that is continually infused through a thin catheter placed into the space that surrounds the spinal cord in the lower back.
 - Numbs larger parts of the body where the patient may be awake or under sedation.
- General anesthesia:

² Applicant group is defined in RCW 18.120.010 as including an individual or group “which proposes that any health professional group not presently regulated be regulated or which proposes to substantially increase the scope of practice of the profession.”

- Is administered through a breathing mask or tube, or through an intravenous line.
- Renders the patient unconscious and unable to move, with the brain not responding to pain signals or reflexes.ⁱ

The risks of anesthesia, including general anesthesia, are generally low. However, older adults and those undergoing lengthy procedures are most at risk of negative outcomes. These can include postoperative confusion, heart attack, pneumonia, and stroke. There is also a risk of unintended intraoperative awareness, which happens when patients report a state of awareness during surgery and may even feel pain. Some specific conditions increase the risk to the patient undergoing general anesthesia, such as obstructive sleep apnea, high blood pressure, smoking, diabetes, or obesity.ⁱⁱ

Anesthesiologist assistants practice as part of an anesthesia care team (ACT) under the direction and supervision of a licensed anesthesiologist who retains responsibility for the immediate care of the patient. They perform such tasks as administering drugs, obtaining vascular access, applying and interpreting monitors, establishing and maintaining a patient's airway, and assisting with preoperative assessment.

Anesthesiologist assistants cannot currently practice in Washington because the proposed scope of practice currently requires a health care license to perform. Physicians, advanced registered nurse practitioners (ARNP), and physician assistants (PA) perform anesthesia within their scope of practice with additional certifications and training to include:

- Physicians - national certification through the National Board of Anesthesiology.
- ARNPs - certification as a CRNA through the National Boards of Certification and Recertification of Nurse Anesthetists.
- PAs - practice under a practice agreement with a supervising physician who has anesthesiology within their scope of practice and expertise. To administer general or intrathecal anesthesia requires evidence of adequate education and training in the delivery of those types of anesthesia, which the WMC is in the process of defining in the rule.³

In addition, anesthesia technicians and technologists work in Washington to support the anesthesia care team through managing and maintaining the anesthesia equipment.ⁱⁱⁱ These providers are not required to hold a health care credential, but they may obtain a national certification.

³ Newly required in [RCW 18.71A.030](#) through amendments in [chapter 80, laws of 2020](#).

Summary of Applicant Report

[RCW 18.120.030](#) requires the applicant group to explain a number of factors about the proposed legislation, including the problem it is attempting to fix, how it ensures practitioners are competent, and how it is in the public interest. The department refers to this as the “applicant report.” The applicant report is intended to supplement the proposed legislation to help the department determine if the proposed change in scope of practice meets the criteria in [RCW 18.120.010\(2\)](#).

Once the department receives the proposed bill and applicant report, we then post the materials online and solicit public comment. We review all the data and comments received, draft our report with initial recommendations, then solicit additional public comment on the draft recommendations. At the end of the public comment period, we review comments received and adjust the report and recommendations as necessary before submitting the final report to the legislature.

According to the applicant report, anesthesiologist assistants are trained extensively in the delivery and maintenance of anesthesia care and advanced patient monitoring. Within the ACT, an anesthesiologist assistant works with other team members to provide treatment that includes an anesthesiologist's involvement in the delivery of every anesthetic. The applicant report states the care team model expands opportunities for anesthesia treatment and helps serve patients more effectively and efficiently. The physician is responsible for the medical direction of a patient's care but may delegate the implementation of an anesthetic plan to the anesthesiologist assistant according to state regulation and local credentialing guidelines.

According to the applicant report, the problem the proposal is attempting to address is:

- Anesthesiologist assistants cannot currently work in Washington because they are not licensed or regulated here and are not authorized to practice except in federal Veterans Affairs facilities.
- Their inability to practice leaves a gap in the workforce because there are fewer than 1,800 anesthesia providers (1,130 anesthesiologists and 657 CRNAs) practicing in Washington.⁴
- Anesthesiologist assistants can help fill the workforce gap because they are highly trained and can support the ACT, allowing the other team members to maximize their time to meet patient needs.
- Anesthesiologist assistant education programs take much less time to complete than anesthesiologist training. This allows more people to work in this profession and protects patient safety by ensuring they work under the direction and supervision of an anesthesiologist.

⁴ Survey done by the Washington State Society of Anesthesiologists.

The applicant report states that patients face significant barriers to care, especially in rural areas, because of gaps in the workforce. The applicant report asserts that the Centers for Medicare and Medicaid Services' (CMS) "rural pass-through" program permits certain low-volume, rural hospitals to pay for nurse anesthetist and anesthesiologist assistant services through a Medicare cost-based "pass-through" mechanism. Because physician anesthesiologists are not authorized for this program, adding anesthesiologist assistants has the potential to increase access in rural hospitals. The applicant report further states that licensure would ensure a larger workforce to meet the needs of patients in Washington.

The applicant report cites a Washington State Society of Anesthesiologists (WSSA) member survey to demonstrate shortages in the workforce. This survey showed 57 percent of practices were trying to hire anesthesiologists, 70 percent of which had positions open for six months or longer. According to the survey, 75 percent of those practices support licensing anesthesiologist assistants.

The applicant report suggests that anesthesiologist assistant practice is safe, as is proven by a lack of peer-reviewed or other credible evidence that their care is less safe than that of nurse anesthetists. The applicant report added that a 2018 study in the medical journal "Anesthesiology" concluded there were no significant differences in mortality, length of stay, or inpatient spending between the two professions.

The applicant report states that the proposed regulation will ensure professional competency through initial and continuing education and examination. Licensed anesthesiologist assistants would possess a premedical background, a master's degree, and comprehensive didactic and clinical training at the graduate school level. This includes completion of an anesthesiologist assistant training program accredited by CAAHEP, and passing an examination administered by the National Commission on the Certification of Anesthesiologist Assistants or another examination approved by the WMC.

Current program accreditation through the CAAHEP requires that instruction is an appropriate sequence of classroom, laboratory, and clinical activities. In addition, programs must include clearly written course syllabi that include course description, objectives, methods of evaluation, topic outlines, and competencies required for graduation. See the Education and Training section below for details on educational programs.

CMS recognizes both CRNAs and anesthesiologist assistants as nonphysician anesthesia providers. CMS provides national guidance on qualifications, the conditions for participation in the Medicare program, and billing guidelines.

The applicant report states the proposed licensure standards are comparable to those in the 17 states that authorize anesthesiologist assistants' practice through licensure laws or practice privileges through physician delegation. See "Other States" section on page 8 for details. It

estimates the cost of education is from about \$49,000 to \$82,000,⁵ and the cost of the national examination is \$1,593.

Education and Training

All anesthesiologist assistant programs currently include comprehensive didactic and clinical training at the graduate school level, as required by CAAHEP. The American Society of Anesthesiologists (ASA) is a CAAHEP member and participates in the accreditation processes for three health professions: anesthesiologist assistant, respiratory therapist, and emergency medical technician-paramedic.⁶

The CAAHEP requires programs to:⁷

- Be supported by an anesthesiology department of a medical school accredited by the Liaison Committee on Medical Education or its equivalent.
- Have the educational resources in the anesthesiology department internally or through educational affiliates that meet the Accreditation Council for Graduate Medical Education (ACGME) criteria or its equivalent for sponsorship of an anesthesiology residency program.
- Have a program director who is a currently certified anesthesiologist assistant and a medical director who is a currently licensed and board-certified physician anesthesiologist.
- Require faculty for the supervised clinical practice to include a physician alone, a physician with an anesthesiologist assistant, or a physician with another nonphysician anesthesia provider.

CAAHEP includes an extensive list of required curriculum topics for didactic and clinical training. Please see applicant report (Appendix C page A-51) for a detailed list.

The requirements for admission to anesthesiologist assistant master's programs include: evidence of a baccalaureate degree from a nationally recognized and regionally accredited college or university, pre-requisite courses required in a pre-med curriculum, documented anesthesia exposure of at least eight hours by observation in the operating room, and official Graduate Record Examination (GRE) or Medical College Admissions Test (MCAT) scores.

There are 13 master's level educational programs for anesthesiologist assistants, from 24-27 months in length, at the following schools:

- Three programs at Case Western Reserve University (at the Cleveland, Ohio, Washington, D.C., and Houston, Texas campuses)

⁵ Not including books, housing, and other fees.

⁶ CAAHEP is the largest accreditor in the health sciences field. In collaboration with its Committees on Accreditation, CAAHEP reviews and accredits over 2000 educational programs in 19 health science occupations and is recognized by the Council for Higher Education Accreditation.

⁷ Applicant report attachment, beginning on page 5.

- Emory University in Atlanta, Georgia
- Indiana University in Indianapolis, Indiana
- Three programs at Nova Southeastern University (at the Fort Lauderdale, Tampa, and Jacksonville, Florida campuses)
- Two programs at South University (at the Savannah, Georgia and Palm Beach, Florida campuses)
- University of Colorado in Denver, Colorado
- University of Missouri-Kansas City (UMKC) in Kansas City, Missouri
- Medical College of Wisconsin in Milwaukee, Wisconsin

Didactic training

The programs include 70-118 hours⁸ of didactic training in the following topic areas:

- Basic medical sciences, including anatomy, biochemistry, physiology, and pharmacology, with particular emphasis on the cardiovascular, respiratory, renal, nervous, and neuromuscular systems.
- Medical biophysics appropriate to anesthesia practice, emphasizing the principles underlying the function of the devices used in anesthesia delivery systems, life support systems, and basic and advanced patient monitors.
- Principles of patient monitoring.
- The function of lab instruments and data interpretation.
- Patient interviewing and assessment.
- Extensive instruction in the clinical practice of anesthesia and patient monitoring in the operating room, preoperative areas, postoperative recovery areas, intensive care units, pain clinics, affiliated clinical laboratories, and other supporting services.
- Emergency preparedness.⁹

Clinical training

The programs also include 2,000-2,500 clinical hours (600 total anesthesia cases) with rotations in all sub-specialty areas of anesthesia practice and across different types of practice locations. Sub-specialties include: general surgery, pediatrics, gynecology, otolaryngology, orthopedics, neurosurgery, ophthalmology, genitourinary surgery, vascular surgery, cardiac surgery, thoracic surgery, transplantation, and trauma.

Clinical training begins in the first year and focuses on all types of anesthesia, including general, epidural, and spinal and peripheral nerve blockade. Instruction is also provided in advanced patient care monitoring techniques and pretesting, calibration, and operation of anesthesia delivery systems and monitors.

⁸ [Case Western Reserve University's program](#) is 70 credits and [University of Colorado-Denver's program](#) is 118 credits.

⁹ See Appendix E for information on specific courses.

National certification

The National Commission for Certification of Anesthesiologist Assistants (NCCAA) grants a national certification for anesthesiologist assistants (CAA) in the United States. CAAs must recertify and pass a written exam every six years and take 40 hours of continuing medical education (CME) credits every two years. There are requirements for a minimum number of clinical hours and an annual evaluation during the first year, followed by a minimum number of cases for second and third-year students by patient population, with an annual evaluation of competency.

Other States

Seventeen states, territories, and districts authorize anesthesiologist assistant practice, with about 2,500 practicing nationally:

- Thirteen states license anesthesiologist assistants as a stand-alone profession with nearly identical education and examination requirements: Alabama, Colorado, Florida, Indiana, Missouri, New Mexico, North Carolina, Ohio, Oklahoma, South Carolina, Vermont, Wisconsin, and Washington, D.C.
- Two states, Kentucky and Georgia, allow physician assistants to practice as an anesthesiologist assistant if they have completed additional training.
- Two states, Michigan and Texas, allow anesthesiology assistant practice privileges through physician delegation.

The numbers of license holders range from as few as 13 in Vermont to over 1,000 in Georgia. The department found very few disciplinary actions and none we could identify causing patient harm. For example, Wisconsin reported two disciplinary actions for drug diversion and disruptive behavior.^{iv} Missouri reported no disciplinary actions, and Ohio reported five disciplinary actions (three probation and two revocations), four related to substance use disorder and one for practicing with an expired license.

The applicant report asserts the scope of practice proposed in the bill is comparable to the other states. However, there are several key differences between the proposed bill and other states:

1. Only three states grant prescriptive authority: Kentucky and Georgia, where practice as an anesthesiologist assistant falls under their physician assistant license, and Vermont. Vermont authorizes prescribing perioperative medications to be used in the accredited facility.
2. Supervision is defined differently by state, with the following key differences:
 - Most states require the supervisor to be present in the operating suite or immediately available when anesthesia services are being performed.

- At least five states require the anesthesiologist to be present in the room during induction of general or regional anesthesia and during emergence from general anesthesia.
3. At least 10 states¹⁰ have a narrower scope of practice than the proposal that only authorizes the anesthesiologist assistant to do tasks such as:
- Obtain a comprehensive patient history, perform relevant elements of a physical exam and present the history to the supervising anesthesiologist.
 - Pretest and calibrate anesthesia delivery systems and obtain and interpret information from the systems and monitors, in consultation with an anesthesiologist.
 - Assist the supervising anesthesiologist with the implementation of medically accepted monitoring techniques.
 - Establish basic and advanced airway interventions, including intubation of the trachea and performing ventilatory support.
 - Administer intermittent vasoactive drugs and start and adjust vasoactive infusions.
 - Administer anesthetic drugs, adjuvant drugs, and accessory drugs.
 - Assist the supervising anesthesiologist with the performance of epidural anesthetic procedures, spinal anesthetic procedures, and other regional anesthetic techniques.
 - Administer blood, blood products, and supportive fluids.¹¹
 - Assist a cardiopulmonary resuscitation team in response to a life-threatening situation.
 - Participate in administrative, research, and clinical teaching activities as authorized by the supervising anesthesiologist.

Key differences in the scopes of practice in these 10 states are:

- Nine of the states only authorize an anesthesiologist assistant to “assist the supervising anesthesiologist” with the performance of epidural, spinal, and other regional anesthetic techniques, rather than “perform” the procedures as in the proposed bill.¹²
- All 10 states authorize “administration” of medications, rather than “ordering” of medications as in the proposed bill.¹³

¹⁰ Ten states and territories have nearly identical scopes of practice, including Florida, Indiana, Missouri, New Mexico, Ohio, Oklahoma, South Carolina, Vermont, Wisconsin, and Washington D.C. In addition, there are only three states with prescriptive authority, and two are those that license anesthesiologist assistants under the physician assistant credential (Vermont is the only other state).

¹¹ South Carolina’s scope of practice in S.C. Code Ann. § 40-47-1240 does not include this function.

¹² Wisconsin authorizes the anesthesiologist assistant to implement spinal, epidural, and regional anesthetic procedures.

¹³ Four of the states have language specifically prohibiting an anesthesiologist assistant from prescribing.

- None of the states authorize ordering postoperative sedation or analgesia, oxygen, respiratory therapy, or medicines, as in the proposed bill.
- Only two states authorize establishing peripheral and central venous and arterial lines, as in the proposed bill.¹⁴

Stakeholder Engagement

Comments on proposal

The department invited comments from the public and stakeholders on the applicant’s proposal in July. We received 295 comments. This section provides a high-level summary of all comments received. (See Appendix D, page A-345 for full public comments.)

Support

The department received comments in support of the proposal from: 39 individuals (13 physician anesthesiologists, 7 physicians, 8 anesthesiologist assistants, and 11 others), and 16 organizations (health care associations, health systems, and educational programs.)

Here is a summary of comments by topic.

The proposal is in the public interest

We received comments from hospitals and health care organizations stating the proposal is in the public interest because:

- Anesthesia care would be overseen by appropriately trained and credentialed physicians.
- They could reserve the more demanding cases for the anesthesiologist.
- The proposal would help ensure a more robust health care workforce and could increase access to care as the demand for anesthesia support continues to rise.
- Using anesthesiologist assistants could lower costs because their salaries are typically lower than that of anesthesiologists and CRNAs.
- Increasing the use of the ACT model could allow hospitals to staff operating rooms more efficiently.
- Anesthesiologist assistants have completed significant accredited graduate level education and training, similar to dental anesthesia assistants, which have been credentialed since 2013.
- CMS recognizes anesthesiologist assistants as nonphysician anesthesia providers for reimbursement.

We also received comments from physicians, including anesthesiologists, echoing the comments above:

¹⁴ Florida and Oklahoma

- Some stated they have worked with anesthesiologist assistants while practicing in other states.
- One physician relayed their experience working with anesthesiologist assistants in a community practice in Missouri, where they worked as part of an ACT. This physician stated that the anesthesiologist assistants allowed for a greater pool of qualified anesthesia providers in a climate where the community had difficulty maintaining adequate staffing levels.
- One anesthesiologist added that because this profession will be supervised, it undercuts the argument that anesthesiologist assistants will compete with CRNAs, who practice independently.

Adequate training

We received comments from anesthesiologist assistant programs, a physician who provides clinical training for anesthesiologist assistants, and associations representing programs attesting to anesthesiologist assistants' high level of training and skills.

Shortage of providers

Many commenters echoed the applicant report's assertion that there is a shortage of anesthesia providers in Washington. One stated that though the 2019-20 physician supply estimates from the Office of Financial Management Health Care Research Center indicated a 4.9% increase in anesthesiologists in Washington, our state still ranks 26th in the nation in a measure of the likelihood of a physician shortfall in the years ahead.

Impact on CRNA practice

We received comments that since CRNAs practice independently in our state, licensure of anesthesiologist assistants should have no impact on their practice in rural and underserved communities where there is no physician supervision.

Interest in working in Washington

We received comments from anesthesiologist assistants working in other states who would love to practice in Washington if the credential is enacted. Some of these comments echoed the applicant report's assertions regarding the substantial training they've received.

Opposed

The department received comments in opposition from:

- 215 individuals (two anesthesiologists, four registered nurses, 162 CRNAs (31 individual comments and 131 submissions of a form letter), and 32 others.)
- Four health care associations representing nurses, ARNPs, and nurse anesthetists.

Here is a brief summary of the comments.

Won't address a workforce shortage

We received comments that anesthesiologist assistants can do little to alleviate shortages of anesthesia providers in rural areas because their scope of practice is limited to working under

supervision, they cannot practice in settings where anesthesiologists do not practice, and there is a low number practicing in the United States. Some commenters stated that the WSSA survey referenced in the applicant report was biased and is not sufficient evidence of a shortage of providers.

Commenters stated that CRNAs are a better alternative to address provider shortages. They stated Washington needs to authorize CRNAs to practice to the full extent of their education and training and ensure they are full partners with physicians and other health professionals in redesigning health care in the United States. They also said Washington needs to evolve into a more cost-effective collaborative, supervisory, or independent practice model, or add more clinical sites for CRNA and anesthesiologist students.

Some argued that the applicant report's assertion of a shortage of anesthesia providers is artificial because many CRNAs would like to work in Washington and could alleviate any anesthesiologist shortages. They assert that some hospitals refuse to hire CRNAs. We received comments from CRNAs working in other states who would love to practice in Washington.

Some commented that physician assistants (PA) might also mitigate workforce issues if they follow newly enacted regulations allowing them to administer general and intrathecal anesthesia with appropriate education and training. Since these regulations are new, they stated we will have to wait to see what effect they have on anesthesia services.

Would increase costs

Many commenters argued that using anesthesiologist assistants would increase costs to patients and medical centers because the ACT model of practice is inflexible and doesn't adequately meet the needs of patients, hospitals, or other health care settings. In addition, the high salaries of supervising anesthesiologists as compared to the CRNA independent practice model, with a much lower salary, will increase costs.

CRNAs are the safer and more cost-effective option

We heard from many CRNAs that using independently practicing CRNAs is more cost-effective than using the ACT model of anesthesia care. They state that there are 120 CRNA programs that graduate nurse anesthetists for autonomous practice (2,500 per year with 50,000 currently in practice). CRNAs administer anesthesia in 67 percent of all Washington hospitals, 93 percent of rural hospitals, and are the only anesthesia provider in 72 percent of rural hospitals. CRNAs' anesthesia care has been repeatedly demonstrated as safe in peer-reviewed studies, while anesthesiologist assistant safety is unproven. We also heard from some self-described patients agreeing that CRNAs are the better, safer alternative and sharing concerns that bringing anesthesiologist assistants to Washington may restrict access and drive up health care costs.

One CRNA provided examples of how the independent care model is more efficient than the ACT model. They used one example of a facility that uses a mix of 10 CRNAs and 10 physician anesthesiologists in an independent practice model. They stated that the facility could provide 20 patients anesthesia services at the same time. They used another example of a facility that

uses a mix of 5 CRNAs, 5 anesthesiologist assistants, and 10 physician anesthesiologists in an ACT model, stating that the facility could provide services to only 17 patients.

Inadequate training

Some commenters stated that applicants are not required to have a health care background before entering an anesthesiologist assistant program. They asserted that clinical hours cited for anesthesiologist assistant programs of 2,000 to 2,700 appear to be overstated because the programs count hours on activities like doing physicals and taking patient histories. They stated these are experiences a licensed RN has mastered prior to nurse anesthesia educational program entry.

Supervision ratios

Some stated that CMS requires anesthesiologist assistants to work under the medical direction of an anesthesiologist, with ratios specified in law. The applicant's proposed legislation allows for a 1:4 ratio, meaning one anesthesiologist can supervise up to four anesthesiologist assistants. They assert this ratio is too high and could lead to patient harm and higher costs.

Commenters stated that physician anesthesiologists are not meeting the supervision ratios CMS requires for reimbursement,¹⁵ which may lead to fraudulent practices or billing. In addition:

- One CRNA wrote of personal experience working in hospitals where up to 75 percent of cases are incorrectly billed under the CMS medical direction model.
- Some commenters included reference to an article in *The Journal of the American Society of Anesthesiologists*,^v which they stated shows high failure rates for meeting medical direction criteria, indicating that critical portions of the anesthesia care plan (which could include induction of general anesthesia or other critical functions) happened with several patients simultaneously and the anesthesiologist was not present.
- Some stated that because anesthesiologist assistants are educated and trained only to practice with supervision, they are unable to respond independently to emergencies, putting patients at risk.

Political move

Some have asserted there are other motives for the proposal besides patient safety and access to care. These include physician anesthesiologists attempting to monopolize anesthesia practice in Washington, asserting false shortages of anesthesia providers that are caused by anesthesiologist-only groups refusing to hire CRNAs when CRNAs in other states want to work in Washington, and profit.

Scope creep

Practicing anesthesiologists in Washington stated they oppose any more scope creep in their specialty and that their specialty has already been fragmented to the detriment of patient care

¹⁵ Supervision ratio requirements for reimbursement are in the Tax Equity and Fiscal Responsibility Act (TEFRA).

by CRNAs. They stated the impetus for the proposal is financial gain for physician anesthesiologist, and it would further diminish the importance of physician training in anesthesia.

Comments Neutral/Other

The department received comments that were neutral or recommended changes from:

- 20 individuals (two anesthesiologist technologists/technicians, 11 CRNAs, two registered nurses, four student nurse anesthetists, and a physician.)
- One organization representing hospitals.
- The Health Care Authority.
- WMC with suggested changes to the proposal.

Here is a brief summary of the comments by topic.

Clarifications

Some commenters stated that the proposal needs to ensure the supervising physician retains control and anesthesiologist assistant duties fall within their scope of practice, training, and experience. They suggested looking at the supervision parameters around the anesthesiologist supervising four assistants at a time, and at supervision in general, to gain an understanding of how many anesthesiologist assistants an anesthesiologist can supervise simultaneously.

One commenter stated the credential should not be called “certified anesthesiologist assistant” because it would be a license in Washington and could be confused with the national certification.

Supervision

Some commenters stated the definition of supervision in the draft bill is in line with a PA’s unsupervised practice but is not appropriate for an anesthesiologist assistant’s practice. The anesthesiologist could be on another floor of a hospital, which would put patients at risk because they could not respond to an emergency quickly. In addition, the draft bill states the WMC will establish requirements and limitations on practice, including being on-call, which one commenter stated does not meet the requirements of being onsite. They added that the 1:4 supervision ratio should be lowered because it is too high based on literature and could lead to patient harm and higher health care costs.

Language that should be removed

Some commented that the anesthesiologist assistant advisory committee in section three of the draft bill should be removed because it is unnecessary given the low number of anesthesiologist assistants expected in Washington if the proposal is enacted (based on the numbers practicing in other states.) This advisory committee would not meet the threshold of work the WMC currently uses to establish advisory committees.

One commenter expressed concern about the language in section five that states anesthesiologist assistants performing preoperative anesthetic evaluations, postoperative anesthetic evaluations, and patient progress notes need to be cosigned within 24 hours. They stated the language allowing the anesthesiologist's signature within 24 hours should be removed because it is not consistent with the supervision language established in Section 1(6) and implies the anesthesiologist is not directing the activities of the anesthesiologist assistant.

Scope of practice

Some commented that the proposed bill should include more limits to the scope of practice because it's too broad. The scope of practice should be included in the legislation so the legislature and stakeholders can provide input.

Implementation suggestions

The WMC requested some additional changes and clarifications that would assist with the implementation of this credential. These included ensuring sufficient time to conduct rulemaking, replacing subjective language regarding an applicant's "moral character" with enforceable language referencing background checks and criminal history verification, deleting the anesthesiologist assistant advisory committee because it is redundant, and some additional suggestions for clarity and consistency.

Other

The Washington State Health Care Authority submitted comments that the proposal would cause minor impacts to programs they administer like Apple Health, like adjustments to billing types. The Health Care Authority also stated that licensing this new profession may help with access to care and wait times for medical procedures because of the limited number of anesthesia providers in Washington; however, the new credential may not draw a lot of providers to our state because of the limited number and high cost of training programs. Additionally, there is limited literature demonstrating anesthesiologist assistants provide the same level of care as anesthesiologists.

Comments on Draft Report

The department posted the draft report online with our initial recommendations and shared it with interested parties for review and comment. Interested parties were given a month to comment on our report and recommendations. In this section, we summarize the comments received, any changes made or not made to our initial recommendations as a result of the comments, and an explanation of our reasoning.

We received 221 comments. This section provides a high-level summary of comments received by position and topic.

Opposed

We received 121 letters of opposition from CRNAs, physicians, associations, and other organizations that included:

- A large number of the comments were nearly identical letters with messages similar to comments from the first comment period, reiterating their position that:
 - This credential would increase costs to the health care system.
 - Anesthesia assistants will not help with shortages in anesthesia care because they can't work in rural areas where there are no physician anesthesiologists.
 - Anesthesiologist assistants are an unproven provider with far less education and training than CRNAs or physician anesthesiologists.
 - CRNAs are a more cost-effective option.

They added that lack of evidence of disciplinary action in other states should not be the only factor to consider in this review.

- Comments that anesthesiologist assistant education does not provide a proper foundation to practice anesthesiology and does not ensure critical thinking skills to address patient emergencies. During an emergency, the operating surgeon may be forced to step in until the supervising anesthesiologist becomes available.
- Comments stating that if the department continues to support this proposal, we should:
 - Clarify medical direction and reduce the supervision ratio of physician to anesthesiologist assistant to 1:2 to ensure proper accessibility during an emergency. The physician should be readily available in the operating room.
 - Require the physician to make rounds on every patient receiving an anesthetic that includes intrathecal, epidural and regional anesthetics hourly, and to be on-site while these anesthetics are being administered or monitored.
 - Require continuing education hours similar to other anesthesia providers.
- Comments that licensing anesthesiologist assistants would create an anti-competitive marketplace between competing providers. Allowing only physicians access to cheaper labor will give them an unfair advantage over CRNAs and we should either support these opportunities for both providers or deny the proposal.
- Comments that anesthesiologists are attempting to stymie CRNA practice through this proposal and that the applicant group has created barriers to clinical placements needed for new CRNA programs.
- Comments that hospitals must also consider the delay in care to patients that create inefficiency in care delivery and can cost lives, reiterating comments on the proposal that proper medical direction is difficult to achieve and gets more difficult with higher supervision ratios like the 1:4 ratio proposed.

We received comments from 12 patients stating they rely on our agency to ensure health care providers are safe to practice. They state we have not shown sufficient evidence to conclude this for anesthesiologist assistants. They also stated that lack of disciplinary action in other states should not be the only factor we consider in this review and we should not support licensure in Washington.

We received comments from five other individuals opposing the draft recommendations.

WASHINGTON STATE DEPARTMENT OF HEALTH

Sunrise Review –Anesthesiologist Assistant

To address patient safety concerns, the department:

- Added clarifications to the recommendations section regarding how the proposal protects the public.
- Added a recommendation to remove the language in section four requiring the commission to allow an anesthesiologist to supervise at least four anesthesiologist assistants at any time and to instead require the commission to work with stakeholders to set the ratio limitation.
- Further clarified that the supervising anesthesiologist should be required to be in the operating room directly supervising the most demanding procedures in the anesthesia plan to include induction and emergence from general anesthesia, as well as epidural, spinal, and intravenous regional anesthesia.

The remainder of the commenters either repeated comments from the first public comment period or were not applicable to the statutory criteria.

Support

We received 77 form letters of support from anesthesiologists and two individual letters reiterating the quality of anesthesiologist assistant education, the efficiency of the anesthesia care team model under which they work, and that they are interchangeable with CRNAs with identical patient care responsibilities and technical capabilities.

The department received comments from the applicant group and three other organizations representing anesthesiologist assistants and anesthesiologists supporting the draft recommendations and providing suggestions on how to clarify supervision and narrow the scope of practice.

Clarify supervision

They recommend amending the language to align with that found in the Medicare Conditions of Participation for anesthesia services ([42 CFR § 482.52](#)) by referencing “immediately available” and defining it as “a medically directing anesthesiologist...is in physical proximity that allows the anesthesiologist to re-establish direct contact with the patient to meet medical needs and any urgent or emergency clinical problems.”

They state this definition maintains the highest level of patient safety standards while taking into account the differences in design and size of various facilities that make it impossible to define a universally applicable specific time or distance for physical proximity.

Narrow the scope of practice

The applicant group (WSSA) and groups representing anesthesiologists and anesthesiologist assistants supported the draft recommendations with some suggested changes.

They agree that some additional clarification regarding the scope of practice could be beneficial, and recommend:

- Authorizing “assisting” rather than “performing,” and adding a definition for “assists.”

“Assists” means the anesthesiologist assistant personally performs those duties and responsibilities delegated by the anesthesiologist. Delegated services must be consistent with the delegating physician’s education, training, experience and active practice. Delegated services must be of the type that a reasonable and prudent physician would find within the scope of sound medical judgment to delegate

- Clarifying that anesthesiologist assistants do not have prescriptive authority by authorizing “administering” rather than “ordering” medications and revising the sections on postoperative care. They recommend striking Section 5 (c) (f) (w) (x) (y) and inserting:

“Under the supervising physician’s consultation and direction, order perioperative pharmaceutical agents, medications, fluids, oxygen therapy and respiratory therapy, to be used only at the facility where ordered, including but not limited to controlled substances, which may be administered prior to the co-signature of the supervising physician. The supervising physician may review and if required by the facility or institutional policy must cosign these orders in a timely manner.”

- The ASA recommends maintaining the proposed scope of practice to create parity with CRNAs because they state it is consistent with their view that anesthesiologist assistants and nurse anesthetists have comparable skills, knowledge, and responsibilities.

To address these comments the department:

- Changed the definition of supervision as suggested.
- Did not make the suggested change to define “assisting” regarding administering general anesthesia and epidural, spinal, and intravenous regional anesthesia because it does not address the department’s and stakeholder concerns. See comments under the Opposed section for clarification of our recommendation.
- Did not change the recommendation regarding prescriptive authority because we do not believe the suggested language above addresses our concerns.

REVIEW OF PROPOSAL USING SUNRISE CRITERIA

The Sunrise Act, in [RCW 18.120.010](#), states that a health care profession should be regulated or the scope of practice expanded only when:

- Unregulated practice can clearly harm or endanger the health, safety, or welfare of the public and the potential for the harm is easily recognizable and not remote or dependent upon tenuous argument.
- The public needs and can reasonably be expected to benefit from an assurance of initial and continuing professional ability.
- The public cannot be effectively protected by other means in a more cost-beneficial manner.

First Criterion: Unregulated practice can clearly harm or endanger the health, safety, or welfare of the public.

The proposal meets this criterion because the unregulated practice of anesthesiology can clearly harm or endanger the public. However, the department recommends a few changes to the draft bill to align with other states where anesthesiologist assistants are practicing safely. These include changes to better define supervision and narrow the scope of practice.

Second Criterion: The public needs and can reasonably be expected to benefit from an assurance of initial and continuing professional ability.

The proposal meets this criterion. For anesthesiologist assistants to practice safely in Washington, the public needs assurance of initial and continuing ability. With our suggested changes, the proposal would assure this through:

- WMC oversight that includes setting education, licensing, and continuing education requirements. WMC must also establish requirements and limitations on practice and will address complaints of unsafe practice.¹⁶
- Completion of an anesthesiologist assistant training program accredited by CAAHEP, cover required topics, and include substantial clinical training.
- Requiring the supervising anesthesiologist to be responsible for assuring the anesthesiologist assistants they supervise are competent to perform delegated tasks based on education, training, and experience.
- Passing an examination administered by the NCCAA or other examination approved by the WMC.

In addition, the department reviewed anesthesiologist assistant programs and found them to include extensive didactic training in accredited programs and substantial clinical training at clinics and diverse hospitals across the country. These clinical programs are required to:

¹⁶ In consultation with the Board of Osteopathic Medicine and Surgery for complaints of unprofessional conduct against a licensee who has a supervising anesthesiologist license under chapter 18.57 RCW.

- Be supported by anesthesiology departments accredited by the Liaison Committee on Medical Education or its equivalent.
- Include educational resources in anesthesiology departments that meet ACGME criteria or the equivalent for residency programs.
- Have medical directors that are currently licensed and board-certified physician anesthesiologists.¹⁷

The department conducted independent research on the safety of using anesthesiologist assistants and agree there is limited data. However, in researching the experience of licensure in other states with the same or similar educational requirements, the department found very few disciplinary actions and none we could identify as relating to patient harm.

Third Criterion: The public cannot be effectively protected by other, more cost-beneficial means.

The department heard concerns the proposal is not cost-effective to the health care system because the independent practice model costs less than the team-based model of providing anesthesia care. We also heard the opposing view, that it could lower costs by helping hospitals staff operating rooms more efficiently. Authorizing licensure of anesthesiologist assistants in our state will create another option for the anesthesia team. Employers will decide what is the most cost-effective option for their practice.

¹⁷ CAAHEP requirements – see Appendix C, page A-41

Recommendations

[RCW 18.120.010](#) states, “the legislature believes that all individuals should be permitted to enter into a health profession unless there is an overwhelming need for the state to protect the interests of the public by restricting entry into the profession.”

The department received many comments stating this profession should not be allowed to practice in Washington because CRNAs are a safer, more cost-effective option for the health care system. These comments are outside the scope of the sunrise criteria. The question we are addressing is whether the proposal protects the public sufficiently to allow this new provider to practice safely under supervision in our state.

Recommendation: The department recommends in favor of the proposal to license anesthesiologist assistants in Washington with changes to assure patient safety.

Rationale: The proposal meets the sunrise criteria to demonstrate it protects the public from harm through:

- Ensuring adequate education and training. Anesthesiologist assistant programs include extensive didactic training in accredited programs and substantial clinical training at clinics and diverse hospitals across the country.
- The department could find no evidence of patient harm in states that license this profession with the same or very similar educational requirements.
- The WMC can set practice limitations to further ensure safe practice.

In addition, licensing this profession is the only option to allow them to practice in Washington.

Recommendation: The department recommends the following changes to the draft bill to increase patient safety:

- Clarify the definition of supervision to:
 - Align with that found in the Medicare Conditions of Participation for anesthesia services ([42 CFR § 482.52](#)). This would include referencing “immediately available” and defining it as “a medically directing anesthesiologist...is in physical proximity that allows the anesthesiologist to re-establish direct contact with the patient to meet medical needs and any urgent or emergency clinical problems.”
 - Require the supervising anesthesiologist to be in the operating room directly supervising the most critical procedures in the anesthesia plan to include induction and emergence from general anesthesia, as well as epidural, spinal, and intravenous regional anesthesia.
- Narrow the scope of practice to more closely match that of the 10 states described on page nine. The most critical changes should include changing the term “ordering” medications to “administering,” and removing the authority to order postoperative sedation or analgesia, oxygen or respiratory therapy, or medicine.

Rationale: Since the states referenced above have similar educational and licensing requirements and the department has not found evidence of patient harm from

anesthesiologist assistant practice, we should follow their lead in developing the scope of practice and supervision requirements.

- Remove the language in section four requiring the commission to allow an anesthesiologist to supervise at least four anesthesiologist assistants at any time and require the commission to work with stakeholders to set the ratio limitation.

Rationale: We heard concerns that a 1:4 supervision ratio is too high and may lead to patient risk if the provider cannot provide the necessary supervision for each assistant. To address these concerns, the WMC should obtain stakeholder input to determine the safest approach to setting this ratio to ensure the supervising anesthesiologist is present for critical portions of the procedure and readily available for emergencies.

- Delete the advisory committee created in section three because it is redundant. Instead, we recommend working with the WMC to determine whether additional members of the board would be necessary to ensure appropriate expertise.

Rationale: The WMC already has mechanisms in place, such as the ability to appoint pro tem members, to provide the functions that would be performed by the advisory committee.

ⁱ Johns Hopkins Medicine, “Anesthesia,” HopkinsMedicine.org. Accessed July 8, 2021, available online at: <https://www.hopkinsmedicine.org/health/treatment-tests-and-therapies/types-of-anesthesia-and-your-anesthesiologist>.

ⁱⁱ Mayo Clinic, “General Anesthesia,” Mayo.Clinic.org. Accessed July 8, 2021, available online at: <https://www.mayoclinic.org/tests-procedures/anesthesia/about/pac-20384568>.

ⁱⁱⁱ American Society of Anesthesiologists, “Types of Careers in Anesthesia,” ASAHQ.org. Accessed August 2, 2021, available online at: <https://www.asahq.org/education-and-career/career-resources/anesthesia-as-a-career/types-of-careers-in-anesthesia>.

^{iv} Wisconsin Department of Safety and Professional Services, “Reports of Decisions,” Wisconsin Department of Safety and Professional Services. Accessed August 6, 2021, available online at: <https://online.drl.wi.gov/orders/searchorders.aspx>.

^v R.H. Epstein and F. Dexter, “Influence of supervision ratios by anesthesiologists on first-case starts and critical portions of anesthetics,” *Anesthesiology: The Journal of the American Society of Anesthesiologists*, Volume 116, No. 3 (2012): 683-691.

Appendix A - Request from Legislature

The Honorable Eileen Cody
303 John L. O'Brien Building
Olympia, WA 98504

May 13, 2021

The Honorable Umair Shah, MD, MPH
Washington State Secretary of Health
Washington State Department of Health
PO Box 47890
Olympia, WA 98504-7890

Dear Secretary Shah,

I am requesting that the Department of Health consider a Sunrise Review application for a proposal to create a license for anesthesiologist assistants in Washington state.

A copy of the proposal is attached (H-1421.1). The House Health Care & Wellness Committee would be interested in an assessment of whether the proposal meets the sunrise criteria for creating a new regulated health profession in Washington. The proponent for this proposal is the Washington State Society of Anesthesiologists (contact: Amy Brackenbury – amy@oysterbaypublicaffairs.com; 360-239-1013).

I appreciate your consideration of this application and I look forward to receiving your report. Please contact my office if you have any questions.

Sincerely,



Representative Eileen Cody, RN
Chair, House Health Care & Wellness Committee
34th Legislative District

Cc: Kelly Cooper, Washington State Department of Health
Ryan Black, Washington State Department of Health
Christie Spice, Washington State Department of Health
Amy Brackenbury, Washington State Society of Anesthesiologists
Jim Morishima, Washington State House of Representatives Office of Program Research

BILL REQUEST - CODE REVISER'S OFFICE

BILL REQ. #: H-1421.1/21

ATTY/TYPIST: MW:roy

BRIEF DESCRIPTION: Licensing anesthesiologist assistants.

1 AN ACT Relating to licensure of anesthesiologist assistants;
2 amending RCW 18.130.040, 18.120.020, and 18.120.020; reenacting and
3 amending RCW 18.130.040; adding a new chapter to Title 18 RCW;
4 providing an effective date; and providing an expiration date.

5 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF WASHINGTON:

6 NEW SECTION. **Sec. 1.** The definitions in this section apply
7 throughout this chapter unless the context clearly requires
8 otherwise.

9 (1) "Anesthesiologist" means a physician licensed under chapter
10 18.71 or 18.57 RCW who has completed a residency in anesthesiology
11 approved by the American board of anesthesiology or the American
12 osteopathic board of anesthesiology.

13 (2) "Anesthesiologist assistant" means a person who is licensed
14 by the commission to practice medicine to a limited extent under the
15 supervision of an anesthesiologist or group of anesthesiologists
16 approved by the commission to supervise such assistant.

17 (3) "Commission" means the Washington medical commission.

18 (4) "Practice medicine" has the meaning defined in RCW 18.71.011.

19 (5) "Secretary" means the secretary of health or the secretary's
20 designee.

1 (6) "Supervision" means the ready, on-site availability of the
2 supervising anesthesiologist for consultation and direction of the
3 activities of the anesthesiologist assistant.

4 NEW SECTION. **Sec. 2.** (1)(a) The commission shall adopt rules
5 fixing the qualifications and the educational and training
6 requirements for licensure as an anesthesiologist assistant. The
7 requirements shall include completion of an anesthesiologist
8 assistant program accredited by the commission on accreditation of
9 allied health education programs and within one year successfully
10 taking and passing an examination administered by the national
11 commission on the certification of anesthesiologist assistants or
12 other examination approved by the commission.

13 (b) The commission shall adopt rules for the issuance of a
14 temporary license to any person who successfully completes an
15 anesthesiologist assistant program accredited by the commission on
16 accreditation of allied health education programs but has not passed
17 a certification examination. To allow the opportunity to take the
18 next available certification examination, any temporary license
19 issued pursuant to this subsection shall be issued for a period not
20 to exceed one year and subject to conditions as determined by the
21 commission in rule.

22 (2) Applicants for licensure shall file an application with the
23 commission on a form prepared by the secretary with the approval of
24 the commission, detailing the education, training, and experience of
25 the applicant and such other information as the commission may
26 require. The application shall be accompanied by a fee determined by
27 the secretary as provided in RCW 43.70.250 and 43.70.280. Each
28 applicant shall furnish proof satisfactory to the commission of the
29 following:

30 (a) That the applicant has completed an accredited
31 anesthesiologist assistant program approved by the commission and is
32 eligible to take the examination approved by the commission;

33 (b) That the applicant is of good moral character; and

34 (c) That the applicant is physically and mentally capable of
35 practicing medicine as an anesthesiologist assistant with reasonable
36 skill and safety. The commission may require an applicant to submit
37 to such examination or examinations as it deems necessary to
38 determine an applicant's physical or mental capability, or both, to
39 safely practice as an anesthesiologist assistant.

1 (3) (a) The commission may approve, deny, or take other
2 disciplinary action upon the application for a license as provided in
3 the uniform disciplinary act, chapter 18.130 RCW.

4 (b) The license shall be renewed as determined under RCW
5 43.70.250 and 43.70.280. The commission shall request licensees to
6 submit information about their current professional practice at the
7 time of license renewal and licensees must provide the information
8 requested.

9 (4) No person shall practice as an anesthesiologist assistant or
10 represent that they are a "certified anesthesiologist assistant" or
11 "anesthesiologist assistant" or "C.A.A." or "A.A." without a license
12 granted by the commission.

13 NEW SECTION. **Sec. 3.** The commission must appoint members to
14 serve on an anesthesiologist assistant advisory committee. At least
15 two of the members must be anesthesiologist assistants and two
16 members must be anesthesiologists. The advisory committee shall
17 review and make recommendations to the commission regarding all
18 matters relating to anesthesiologist assistants that come before the
19 board, including but not be limited to:

- 20 (1) Applications for licensure;
- 21 (2) Anesthesiologist assistant education;
- 22 (3) Scope of practice;
- 23 (4) Licensure requirements; and
- 24 (5) Continuing medical education.

25 NEW SECTION. **Sec. 4.** (1) The commission shall adopt rules
26 establishing the requirements and limitations on the practice by and
27 supervision of anesthesiologist assistants, including the number of
28 anesthesiologist assistants an anesthesiologist may supervise
29 concurrently, but the commission must allow an anesthesiologist to
30 supervise at least four anesthesiologist assistants at any time.

31 (2) The commission may adopt rules for the arrangement of other
32 anesthesiologists to serve as backup or on-call supervising
33 anesthesiologists for multiple anesthesiologist assistants.

34 NEW SECTION. **Sec. 5.** (1) An anesthesiologist assistant may
35 perform those duties and responsibilities delegated to them by the
36 supervising anesthesiologist, and for which they are competent to
37 perform based on their education, training, and experience. Duties

1 which an anesthesiologist may delegate to an anesthesiologist
2 assistant include but are not limited to:

3 (a) Performing preoperative anesthetic evaluations, postoperative
4 anesthetic evaluations, and patient progress notes, all to be
5 cosigned by the supervising physician within 24 hours;

6 (b) Ordering and performing preoperative consultations;

7 (c) Ordering preoperative medications, including but not limited
8 to controlled substances, which may be administered prior to the
9 cosignature by the supervising physician;

10 (d) Changing or discontinuing a medical treatment plan, after
11 consultation with the supervising physician;

12 (e) Obtaining informed consent for anesthesia or related
13 procedures;

14 (f) Ordering the perioperative continuation of current
15 medications, which may be administered prior to the cosignature by
16 the supervising physician;

17 (g) Calibrating anesthesia delivery systems and obtaining and
18 interpreting information from the systems and monitors, in
19 consultation with an anesthesiologist;

20 (h) Assisting the supervising anesthesiologist with the
21 implementation of medically accepted monitoring techniques;

22 (i) Performing basic and advanced airway interventions, including
23 but not limited to endotracheal intubation, laryngeal mask insertion,
24 and other advanced airways techniques;

25 (j) Establishing peripheral intravenous lines, including
26 subcutaneous lidocaine use;

27 (k) Establishing radial and dorsalis pedis arterial lines and
28 central lines;

29 (l) Performing general anesthesia, including induction,
30 maintenance and emergence;

31 (m) Performing procedures associated with general anesthesia,
32 such as but not limited to gastric intubation;

33 (n) Administering intermittent vasoactive drugs and starting and
34 titrating vasoactive infusions for the treatment of patient responses
35 to anesthesia;

36 (o) Performing epidural, spinal, and intravenous regional
37 anesthesia;

38 (p) Maintaining and managing established neuraxial and regional
39 anesthesia;

40 (q) Performing monitored anesthesia care;

1 (r) Evaluating and managing patient controlled analgesia,
2 epidural catheters, and peripheral nerve catheters;

3 (s) Obtaining venous and arterial blood samples;

4 (t) Performing, ordering, and interpreting appropriate
5 preoperative, point of care, intraoperative, or postoperative
6 diagnostic tests or procedures as authorized by the supervising
7 anesthesiologist;

8 (u) Obtaining and administering perioperative anesthesia and
9 related pharmaceutical agents including intravenous fluids and blood
10 products;

11 (v) Participating in management of the patient while in the
12 preoperative suite and recovery area;

13 (w) Ordering postoperative sedation, anxiolysis, analgesia, which
14 may be administered prior to the cosignature by the supervising
15 physician;

16 (x) Ordering postoperative oxygen therapy, including initial
17 ventilator therapy, which may be administered prior to the
18 cosignature by the supervising physician;

19 (y) Ordering postoperative respiratory therapy and medicines for
20 the treatment of patient responses to anesthesia, which may be
21 administered prior to the cosignature by the supervising physician;

22 (z) Providing assistance to a cardiopulmonary resuscitation team
23 in response to a life-threatening situation;

24 (aa) Participating in administrative, research, and clinical
25 teaching activities as authorized by the supervising
26 anesthesiologist; and

27 (bb) Performing such other tasks not prohibited by law under the
28 supervision of a licensed anesthesiologist that an anesthesiologist
29 assistant has been trained and is proficient to perform.

30 (2) Nothing in this section shall be construed to prevent an
31 anesthesiologist assistant from having access to and being able to
32 obtain drugs as directed by the supervising anesthesiologist.

33 NEW SECTION. **Sec. 6.** No anesthesiologist who supervises a
34 licensed anesthesiologist assistant in accordance with and within the
35 terms of any permission granted by the commission is considered as
36 aiding and abetting an unlicensed person to practice medicine. The
37 supervising anesthesiologist and anesthesiologist assistant shall
38 retain professional and personal responsibility for any act which

1 constitutes the practice of medicine as defined in RCW 18.71.011 when
2 performed by the anesthesiologist assistant.

3 NEW SECTION. **Sec. 7.** An anesthesiologist assistant may sign and
4 attest to any certificates, cards, forms, or other required
5 documentation that the anesthesiologist assistant's supervising
6 anesthesiologist may sign, provided that it is within the
7 anesthesiologist assistant's scope of practice.

8 NEW SECTION. **Sec. 8.** (1) The uniform disciplinary act, chapter
9 18.130 RCW, governs the issuance and denial of licenses and the
10 discipline of licensees under this chapter.

11 (2) The commission shall consult with the board of osteopathic
12 medicine and surgery when investigating allegations of unprofessional
13 conduct against a licensee who has a supervising anesthesiologist
14 license under chapter 18.57 RCW.

15 **Sec. 9.** RCW 18.130.040 and 2019 c 444 s 11, 2019 c 308 s 18, and
16 2019 c 55 s 7 are each reenacted and amended to read as follows:

17 (1) This chapter applies only to the secretary and the boards and
18 commissions having jurisdiction in relation to the professions
19 licensed under the chapters specified in this section. This chapter
20 does not apply to any business or profession not licensed under the
21 chapters specified in this section.

22 (2) (a) The secretary has authority under this chapter in relation
23 to the following professions:

24 (i) Dispensing opticians licensed and designated apprentices
25 under chapter 18.34 RCW;

26 (ii) Midwives licensed under chapter 18.50 RCW;

27 (iii) Ocularists licensed under chapter 18.55 RCW;

28 (iv) Massage therapists and businesses licensed under chapter
29 18.108 RCW;

30 (v) Dental hygienists licensed under chapter 18.29 RCW;

31 (vi) Acupuncturists or acupuncture and Eastern medicine
32 practitioners licensed under chapter 18.06 RCW;

33 (vii) Radiologic technologists certified and X-ray technicians
34 registered under chapter 18.84 RCW;

35 (viii) Respiratory care practitioners licensed under chapter
36 18.89 RCW;

1 (ix) Hypnotherapists and agency affiliated counselors registered
2 and advisors and counselors certified under chapter 18.19 RCW;
3 (x) Persons licensed as mental health counselors, mental health
4 counselor associates, marriage and family therapists, marriage and
5 family therapist associates, social workers, social work associates—
6 advanced, and social work associates—independent clinical under
7 chapter 18.225 RCW;
8 (xi) Persons registered as nursing pool operators under chapter
9 18.52C RCW;
10 (xii) Nursing assistants registered or certified or medication
11 assistants endorsed under chapter 18.88A RCW;
12 (xiii) Dietitians and nutritionists certified under chapter
13 18.138 RCW;
14 (xiv) Substance use disorder professionals, substance use
15 disorder professional trainees, or co-occurring disorder specialists
16 certified under chapter 18.205 RCW;
17 (xv) Sex offender treatment providers and certified affiliate sex
18 offender treatment providers certified under chapter 18.155 RCW;
19 (xvi) Persons licensed and certified under chapter 18.73 RCW or
20 RCW 18.71.205;
21 (xvii) Orthotists and prosthetists licensed under chapter 18.200
22 RCW;
23 (xviii) Surgical technologists registered under chapter 18.215
24 RCW;
25 (xix) Recreational therapists under chapter 18.230 RCW;
26 (xx) Animal massage therapists certified under chapter 18.240
27 RCW;
28 (xxi) Athletic trainers licensed under chapter 18.250 RCW;
29 (xxii) Home care aides certified under chapter 18.88B RCW;
30 (xxiii) Genetic counselors licensed under chapter 18.290 RCW;
31 (xxiv) Reflexologists certified under chapter 18.108 RCW;
32 (xxv) Medical assistants-certified, medical assistants-
33 hemodialysis technician, medical assistants-phlebotomist, forensic
34 phlebotomist, and medical assistants-registered certified and
35 registered under chapter 18.360 RCW; and
36 (xxvi) Behavior analysts, assistant behavior analysts, and
37 behavior technicians under chapter 18.380 RCW.
38 (b) The boards and commissions having authority under this
39 chapter are as follows:

- 1 (i) The podiatric medical board as established in chapter 18.22
2 RCW;
- 3 (ii) The chiropractic quality assurance commission as established
4 in chapter 18.25 RCW;
- 5 (iii) The dental quality assurance commission as established in
6 chapter 18.32 RCW governing licenses issued under chapter 18.32 RCW,
7 licenses and registrations issued under chapter 18.260 RCW, and
8 certifications issued under chapter 18.350 RCW;
- 9 (iv) The board of hearing and speech as established in chapter
10 18.35 RCW;
- 11 (v) The board of examiners for nursing home administrators as
12 established in chapter 18.52 RCW;
- 13 (vi) The optometry board as established in chapter 18.54 RCW
14 governing licenses issued under chapter 18.53 RCW;
- 15 (vii) The board of osteopathic medicine and surgery as
16 established in chapter 18.57 RCW governing licenses issued under
17 chapters 18.57 and 18.57A RCW;
- 18 (viii) The pharmacy quality assurance commission as established
19 in chapter 18.64 RCW governing licenses issued under chapters 18.64
20 and 18.64A RCW;
- 21 (ix) The Washington medical commission as established in chapter
22 18.71 RCW governing licenses and registrations issued under chapters
23 18.71 ~~((and))~~, 18.71A ((RCW)), and 18.--- RCW (the new chapter
24 created in section 13 of this act);
- 25 (x) The board of physical therapy as established in chapter 18.74
26 RCW;
- 27 (xi) The board of occupational therapy practice as established in
28 chapter 18.59 RCW;
- 29 (xii) The nursing care quality assurance commission as
30 established in chapter 18.79 RCW governing licenses and registrations
31 issued under that chapter;
- 32 (xiii) The examining board of psychology and its disciplinary
33 committee as established in chapter 18.83 RCW;
- 34 (xiv) The veterinary board of governors as established in chapter
35 18.92 RCW;
- 36 (xv) The board of naturopathy established in chapter 18.36A RCW;
37 and
- 38 (xvi) The board of denturists established in chapter 18.30 RCW.
- 39 (3) In addition to the authority to discipline license holders,
40 the disciplining authority has the authority to grant or

1 licenses. The disciplining authority may also grant a license subject
2 to conditions.

3 (4) All disciplining authorities shall adopt procedures to ensure
4 substantially consistent application of this chapter, the uniform
5 disciplinary act, among the disciplining authorities listed in
6 subsection (2) of this section.

7 **Sec. 10.** RCW 18.130.040 and 2020 c 80 s 23 are each amended to
8 read as follows:

9 (1) This chapter applies only to the secretary and the boards and
10 commissions having jurisdiction in relation to the professions
11 licensed under the chapters specified in this section. This chapter
12 does not apply to any business or profession not licensed under the
13 chapters specified in this section.

14 (2) (a) The secretary has authority under this chapter in relation
15 to the following professions:

16 (i) Dispensing opticians licensed and designated apprentices
17 under chapter 18.34 RCW;

18 (ii) Midwives licensed under chapter 18.50 RCW;

19 (iii) Ocularists licensed under chapter 18.55 RCW;

20 (iv) Massage therapists and businesses licensed under chapter
21 18.108 RCW;

22 (v) Dental hygienists licensed under chapter 18.29 RCW;

23 (vi) Acupuncturists or acupuncture and Eastern medicine
24 practitioners licensed under chapter 18.06 RCW;

25 (vii) Radiologic technologists certified and X-ray technicians
26 registered under chapter 18.84 RCW;

27 (viii) Respiratory care practitioners licensed under chapter
28 18.89 RCW;

29 (ix) Hypnotherapists and agency affiliated counselors registered
30 and advisors and counselors certified under chapter 18.19 RCW;

31 (x) Persons licensed as mental health counselors, mental health
32 counselor associates, marriage and family therapists, marriage and
33 family therapist associates, social workers, social work associates—
34 advanced, and social work associates—independent clinical under
35 chapter 18.225 RCW;

36 (xi) Persons registered as nursing pool operators under chapter
37 18.52C RCW;

38 (xii) Nursing assistants registered or certified or medication
39 assistants endorsed under chapter 18.88A RCW;

- 1 (xiii) Dietitians and nutritionists certified under chapter
2 18.138 RCW;
- 3 (xiv) Substance use disorder professionals, substance use
4 disorder professional trainees, or co-occurring disorder specialists
5 certified under chapter 18.205 RCW;
- 6 (xv) Sex offender treatment providers and certified affiliate sex
7 offender treatment providers certified under chapter 18.155 RCW;
- 8 (xvi) Persons licensed and certified under chapter 18.73 RCW or
9 RCW 18.71.205;
- 10 (xvii) Orthotists and prosthetists licensed under chapter 18.200
11 RCW;
- 12 (xviii) Surgical technologists registered under chapter 18.215
13 RCW;
- 14 (xix) Recreational therapists under chapter 18.230 RCW;
- 15 (xx) Animal massage therapists certified under chapter 18.240
16 RCW;
- 17 (xxi) Athletic trainers licensed under chapter 18.250 RCW;
- 18 (xxii) Home care aides certified under chapter 18.88B RCW;
- 19 (xxiii) Genetic counselors licensed under chapter 18.290 RCW;
- 20 (xxiv) Reflexologists certified under chapter 18.108 RCW;
- 21 (xxv) Medical assistants-certified, medical assistants-
22 hemodialysis technician, medical assistants-phlebotomist, forensic
23 phlebotomist, and medical assistants-registered certified and
24 registered under chapter 18.360 RCW; and
- 25 (xxvi) Behavior analysts, assistant behavior analysts, and
26 behavior technicians under chapter 18.380 RCW.
- 27 (b) The boards and commissions having authority under this
28 chapter are as follows:
- 29 (i) The podiatric medical board as established in chapter 18.22
30 RCW;
- 31 (ii) The chiropractic quality assurance commission as established
32 in chapter 18.25 RCW;
- 33 (iii) The dental quality assurance commission as established in
34 chapter 18.32 RCW governing licenses issued under chapter 18.32 RCW,
35 licenses and registrations issued under chapter 18.260 RCW, and
36 certifications issued under chapter 18.350 RCW;
- 37 (iv) The board of hearing and speech as established in chapter
38 18.35 RCW;
- 39 (v) The board of examiners for nursing home administrators as
40 established in chapter 18.52 RCW;

1 (vi) The optometry board as established in chapter 18.54 RCW
2 governing licenses issued under chapter 18.53 RCW;

3 (vii) The board of osteopathic medicine and surgery as
4 established in chapter 18.57 RCW governing licenses issued under
5 chapter 18.57 RCW;

6 (viii) The pharmacy quality assurance commission as established
7 in chapter 18.64 RCW governing licenses issued under chapters 18.64
8 and 18.64A RCW;

9 (ix) The Washington medical commission as established in chapter
10 18.71 RCW governing licenses and registrations issued under chapters
11 18.71 ~~((and))~~, 18.71A ~~((RCW))~~, and 18.--- RCW (the new chapter
12 created in section 13 of this act);

13 (x) The board of physical therapy as established in chapter 18.74
14 RCW;

15 (xi) The board of occupational therapy practice as established in
16 chapter 18.59 RCW;

17 (xii) The nursing care quality assurance commission as
18 established in chapter 18.79 RCW governing licenses and registrations
19 issued under that chapter;

20 (xiii) The examining board of psychology and its disciplinary
21 committee as established in chapter 18.83 RCW;

22 (xiv) The veterinary board of governors as established in chapter
23 18.92 RCW;

24 (xv) The board of naturopathy established in chapter 18.36A RCW;
25 and

26 (xvi) The board of denturists established in chapter 18.30 RCW.

27 (3) In addition to the authority to discipline license holders,
28 the disciplining authority has the authority to grant or deny
29 licenses. The disciplining authority may also grant a license subject
30 to conditions.

31 (4) All disciplining authorities shall adopt procedures to ensure
32 substantially consistent application of this chapter, the uniform
33 disciplinary act, among the disciplining authorities listed in
34 subsection (2) of this section.

35 **Sec. 11.** RCW 18.120.020 and 2019 c 308 s 17 are each amended to
36 read as follows:

37 The definitions in this section apply throughout this chapter
38 unless the context clearly requires otherwise.

1 (1) "Applicant group" includes any health professional group or
2 organization, any individual, or any other interested party which
3 proposes that any health professional group not presently regulated
4 be regulated or which proposes to substantially increase the scope of
5 practice of the profession.

6 (2) "Certificate" and "certification" mean a voluntary process by
7 which a statutory regulatory entity grants recognition to an
8 individual who (a) has met certain prerequisite qualifications
9 specified by that regulatory entity, and (b) may assume or use
10 "certified" in the title or designation to perform prescribed health
11 professional tasks.

12 (3) "Grandfather clause" means a provision in a regulatory
13 statute applicable to practitioners actively engaged in the regulated
14 health profession prior to the effective date of the regulatory
15 statute which exempts the practitioners from meeting the prerequisite
16 qualifications set forth in the regulatory statute to perform
17 prescribed occupational tasks.

18 (4) "Health professions" means and includes the following health
19 and health-related licensed or regulated professions and occupations:
20 Podiatric medicine and surgery under chapter 18.22 RCW; chiropractic
21 under chapter 18.25 RCW; dental hygiene under chapter 18.29 RCW;
22 dentistry under chapter 18.32 RCW; denturism under chapter 18.30 RCW;
23 dental anesthesia assistants under chapter 18.350 RCW; dispensing
24 opticians under chapter 18.34 RCW; hearing instruments under chapter
25 18.35 RCW; naturopaths under chapter 18.36A RCW; embalming and
26 funeral directing under chapter 18.39 RCW; midwifery under chapter
27 18.50 RCW; nursing home administration under chapter 18.52 RCW;
28 optometry under chapters 18.53 and 18.54 RCW; ocularists under
29 chapter 18.55 RCW; osteopathic medicine and surgery under chapters
30 18.57 and 18.57A RCW; pharmacy under chapters 18.64 and 18.64A RCW;
31 medicine under chapters 18.71 and 18.71A RCW; emergency medicine
32 under chapter 18.73 RCW; physical therapy under chapter 18.74 RCW;
33 practical nurses under chapter 18.79 RCW; psychologists under chapter
34 18.83 RCW; registered nurses under chapter 18.79 RCW; occupational
35 therapists licensed under chapter 18.59 RCW; respiratory care
36 practitioners licensed under chapter 18.89 RCW; veterinarians and
37 veterinary technicians under chapter 18.92 RCW; massage therapists
38 under chapter 18.108 RCW; acupuncturists or acupuncture and Eastern
39 medicine practitioners licensed under chapter 18.06 RCW; persons
40 registered under chapter 18.19 RCW; persons licensed as mental health

1 counselors, marriage and family therapists, and social workers under
2 chapter 18.225 RCW; dietitians and nutritionists certified by chapter
3 18.138 RCW; radiologic technicians under chapter 18.84 RCW; nursing
4 assistants registered or certified under chapter 18.88A RCW;
5 reflexologists certified under chapter 18.108 RCW; medical
6 assistants-certified, medical assistants-hemodialysis technician,
7 medical assistants-phlebotomist, forensic phlebotomist, and medical
8 assistants-registered certified and registered under chapter 18.360
9 RCW; ~~((and))~~ licensed behavior analysts, licensed assistant behavior
10 analysts, and certified behavior technicians under chapter 18.380
11 RCW; and anesthesiologist assistants licensed under chapter 18.---
12 RCW (the new chapter created in section 13 of this act).

13 (5) "Inspection" means the periodic examination of practitioners
14 by a state agency in order to ascertain whether the practitioners'
15 occupation is being carried out in a fashion consistent with the
16 public health, safety, and welfare.

17 (6) "Legislative committees of reference" means the standing
18 legislative committees designated by the respective rules committees
19 of the senate and house of representatives to consider proposed
20 legislation to regulate health professions not previously regulated.

21 (7) "License," "licensing," and "licensure" mean permission to
22 engage in a health profession which would otherwise be unlawful in
23 the state in the absence of the permission. A license is granted to
24 those individuals who meet prerequisite qualifications to perform
25 prescribed health professional tasks and for the use of a particular
26 title.

27 (8) "Practitioner" means an individual who (a) has achieved
28 knowledge and skill by practice, and (b) is actively engaged in a
29 specified health profession.

30 (9) "Professional license" means an individual, nontransferable
31 authorization to carry on a health activity based on qualifications
32 which include: (a) Graduation from an accredited or approved program,
33 and (b) acceptable performance on a qualifying examination or series
34 of examinations.

35 (10) "Public member" means an individual who is not, and never
36 was, a member of the health profession being regulated or the spouse
37 of a member, or an individual who does not have and never has had a
38 material financial interest in either the rendering of the health
39 professional service being regulated or an activity directly related
40 to the profession being regulated.

1 (11) "Registration" means the formal notification which, prior to
2 rendering services, a practitioner shall submit to a state agency
3 setting forth the name and address of the practitioner; the location,
4 nature and operation of the health activity to be practiced; and, if
5 required by the regulatory entity, a description of the service to be
6 provided.

7 (12) "Regulatory entity" means any board, commission, agency,
8 division, or other unit or subunit of state government which
9 regulates one or more professions, occupations, industries,
10 businesses, or other endeavors in this state.

11 (13) "State agency" includes every state office, department,
12 board, commission, regulatory entity, and agency of the state, and,
13 where provided by law, programs and activities involving less than
14 the full responsibility of a state agency.

15 **Sec. 12.** RCW 18.120.020 and 2020 c 80 s 22 are each amended to
16 read as follows:

17 The definitions in this section apply throughout this chapter
18 unless the context clearly requires otherwise.

19 (1) "Applicant group" includes any health professional group or
20 organization, any individual, or any other interested party which
21 proposes that any health professional group not presently regulated
22 be regulated or which proposes to substantially increase the scope of
23 practice of the profession.

24 (2) "Certificate" and "certification" mean a voluntary process by
25 which a statutory regulatory entity grants recognition to an
26 individual who (a) has met certain prerequisite qualifications
27 specified by that regulatory entity, and (b) may assume or use
28 "certified" in the title or designation to perform prescribed health
29 professional tasks.

30 (3) "Grandfather clause" means a provision in a regulatory
31 statute applicable to practitioners actively engaged in the regulated
32 health profession prior to the effective date of the regulatory
33 statute which exempts the practitioners from meeting the prerequisite
34 qualifications set forth in the regulatory statute to perform
35 prescribed occupational tasks.

36 (4) "Health professions" means and includes the following health
37 and health-related licensed or regulated professions and occupations:
38 Podiatric medicine and surgery under chapter 18.22 RCW; chiropractic
39 under chapter 18.25 RCW; dental hygiene under chapter 18.29 RCW;

1 dentistry under chapter 18.32 RCW; denturism under chapter 18.30 RCW;
2 dental anesthesia assistants under chapter 18.350 RCW; dispensing
3 opticians under chapter 18.34 RCW; hearing instruments under chapter
4 18.35 RCW; naturopaths under chapter 18.36A RCW; embalming and
5 funeral directing under chapter 18.39 RCW; midwifery under chapter
6 18.50 RCW; nursing home administration under chapter 18.52 RCW;
7 optometry under chapters 18.53 and 18.54 RCW; ocularists under
8 chapter 18.55 RCW; osteopathic medicine and surgery under chapter
9 18.57 RCW; pharmacy under chapters 18.64 and 18.64A RCW; medicine
10 under chapters 18.71 and 18.71A RCW; emergency medicine under chapter
11 18.73 RCW; physical therapy under chapter 18.74 RCW; practical nurses
12 under chapter 18.79 RCW; psychologists under chapter 18.83 RCW;
13 registered nurses under chapter 18.79 RCW; occupational therapists
14 licensed under chapter 18.59 RCW; respiratory care practitioners
15 licensed under chapter 18.89 RCW; veterinarians and veterinary
16 technicians under chapter 18.92 RCW; massage therapists under chapter
17 18.108 RCW; acupuncturists or acupuncture and Eastern medicine
18 practitioners licensed under chapter 18.06 RCW; persons registered
19 under chapter 18.19 RCW; persons licensed as mental health
20 counselors, marriage and family therapists, and social workers under
21 chapter 18.225 RCW; dietitians and nutritionists certified by chapter
22 18.138 RCW; radiologic technicians under chapter 18.84 RCW; nursing
23 assistants registered or certified under chapter 18.88A RCW;
24 reflexologists certified under chapter 18.108 RCW; medical
25 assistants-certified, medical assistants-hemodialysis technician,
26 medical assistants-phlebotomist, forensic phlebotomist, and medical
27 assistants-registered certified and registered under chapter 18.360
28 RCW; ~~(and)~~ licensed behavior analysts, licensed assistant behavior
29 analysts, and certified behavior technicians under chapter 18.380
30 RCW; and anesthesiologist assistants licensed under chapter 18.---
31 RCW (the new chapter created in section 13 of this act).

32 (5) "Inspection" means the periodic examination of practitioners
33 by a state agency in order to ascertain whether the practitioners'
34 occupation is being carried out in a fashion consistent with the
35 public health, safety, and welfare.

36 (6) "Legislative committees of reference" means the standing
37 legislative committees designated by the respective rules committees
38 of the senate and house of representatives to consider proposed
39 legislation to regulate health professions not previously regulated.

1 (7) "License," "licensing," and "licensure" mean permission to
2 engage in a health profession which would otherwise be unlawful in
3 the state in the absence of the permission. A license is granted to
4 those individuals who meet prerequisite qualifications to perform
5 prescribed health professional tasks and for the use of a particular
6 title.

7 (8) "Practitioner" means an individual who (a) has achieved
8 knowledge and skill by practice, and (b) is actively engaged in a
9 specified health profession.

10 (9) "Professional license" means an individual, nontransferable
11 authorization to carry on a health activity based on qualifications
12 which include: (a) Graduation from an accredited or approved program,
13 and (b) acceptable performance on a qualifying examination or series
14 of examinations.

15 (10) "Public member" means an individual who is not, and never
16 was, a member of the health profession being regulated or the spouse
17 of a member, or an individual who does not have and never has had a
18 material financial interest in either the rendering of the health
19 professional service being regulated or an activity directly related
20 to the profession being regulated.

21 (11) "Registration" means the formal notification which, prior to
22 rendering services, a practitioner shall submit to a state agency
23 setting forth the name and address of the practitioner; the location,
24 nature and operation of the health activity to be practiced; and, if
25 required by the regulatory entity, a description of the service to be
26 provided.

27 (12) "Regulatory entity" means any board, commission, agency,
28 division, or other unit or subunit of state government which
29 regulates one or more professions, occupations, industries,
30 businesses, or other endeavors in this state.

31 (13) "State agency" includes every state office, department,
32 board, commission, regulatory entity, and agency of the state, and,
33 where provided by law, programs and activities involving less than
34 the full responsibility of a state agency.

35 NEW SECTION. **Sec. 13.** Sections 1 through 8 of this act
36 constitute a new chapter in Title 18 RCW.

37 NEW SECTION. **Sec. 14.** Sections 9 and 11 of this act expire July
38 1, 2022.

1 NEW SECTION. **Sec. 15.** Sections 10 and 12 of this act take
2 effect July 1, 2022.

--- **END** ---

Cover Sheet

Legislative proposal being reviewed under the sunrise process (include bill number if available):

H-1421.1 (see attached)

Name and title of profession the applicant seeks to credential:

Certified Anesthesiologist Assistant (CAA)
Title 18 RCW

Approximate number of individuals practicing in Washington:

0

Information about applicant's organization:

- **Organization name**
Washington State Society of Anesthesiologists
- **Contact person:**
2021 WSSA President, Stephanie Yang, MD yangstephy@gmail.com
WSSA Lobbyist, Amy Brackenbury amy@oysterbaypublicaffairs.com
- **Address:**
2150 N. 107th St., Suite 205
Seattle, WA 98133-9009
- **Telephone number:**
206-209-5266
- **Number of members in the organization:**
1,385

Name(s) and address(es) of national organization(s) with which the state organization is affiliated and number of members in the organization:

American Society of Anesthesiologists
905 16th Street
Washington, D.C. 20006
Number of Members: 54,000

American Medical Association
AMA Plaza
330 N. Wabash Ave., Suite 39300
Chicago, IL 60611-5885
Number of Members: 240,000

Name(s) of other state or national organizations representing the profession:

American Academy of Anesthesiologist Assistants
1818 Parmenter St., Suite 300
Middleton, WA 53562
Number of Members: 3,000

List the states that regulate this profession:

The proposed standards for licensure of CAAs are comparable to the standards in other states that have adopted laws regulating CAAs. Fifteen states, territories, and districts allow and regulate CAAs to work:

- Alabama
- Colorado
- District of Columbia
- Florida
- Georgia
- Indiana
- Kentucky
- Missouri
- New Mexico
- North Carolina
- Ohio
- Oklahoma
- South Carolina
- Vermont
- Wisconsin

In addition, the following two states grant practice privilege through physician delegation:

- Michigan
- Texas

Factors to Address

Address the following (RCW 18.120.030)

1. *A definition of the problem and why regulation is necessary:*

Certified Anesthesiologist Assistants (CAAs) are highly skilled health professionals who work under the direction of licensed anesthesiologists to implement anesthesia care plans. CAAs work exclusively within the [Anesthesia Care Team model](#), as described by the American Society of Anesthesiologists (ASA). All CAAs possess a premedical background, a baccalaureate degree, and a master's degree from a program affiliated with a school of medicine. CAAs also complete a comprehensive didactic and clinical program at the graduate school level. Didactic Education includes up to 132 hours (program dependent). Clinical program training consists of a minimum of 2000 hours (average > 2500 hours), and all hours are in sub-specialties of anesthesia or a minimum of 600 cases.

CAAs are trained extensively in the delivery and maintenance of quality anesthesia care as well as advanced patient monitoring techniques. The goal of CAA education is to guide the transformation of qualified student applicants into competent health care practitioners who aspire to practice in the anesthesia care team.

CAAs provide a critical addition to the health care provider field with their high level of training and the core foundation of the position functioning as part of an Anesthesia Care Team under the direction of a licensed anesthesiologist. The care team model expands the medical treatment provided by the anesthesiologist and equips the medical facility to serve patients more effectively and efficiently. In states that have licensure for CAAs, they often work in tandem and interchangeably on teams alongside Certified Registered Nurse Anesthetists (CRNAs). One key distinction between CAAs and CRNAs is that CAAs always must work under the supervision of anesthesiologists who retain responsibility for the immediate care of the patient.

CAAs are not currently licensed or regulated by Washington State, which means they are not authorized to practice in this state, with the exception of federal Veterans Affairs Facilities. The inability to practice in Washington leaves a gap in the workforce. There are fewer than 1,800 anesthesia providers (anesthesiologists and CRNAs) currently practicing throughout the state. CAAs are a smart solution in that the position is highly trained, and works with the purpose of supporting the anesthesiologist as part of an Anesthesia Care Team, which in turn allows each member of the team to maximize their time and better meet the needs of patients.

While CAAs don't have licensure in Washington, they are licensed in fifteen states and U.S. territories and have delegatory authority in two additional states (due to these states' medical practice acts). In addition, the federal Centers for Medicare and Medicaid Services (CMS) recognize CAAs as non-physician anesthesia providers, just as they do

nurse anesthetists. Further, the Washington Medical Commission has proposed rules to regulate when physician assistants may administer anesthesia, which define adequate education and training for administering general and intrathecal anesthesia as “completion of an accredited anesthesiologist assistant program.” This highlights that they are a known and recognized health profession that practices in many places throughout the country. Adding state licensure will bring valuable health professionals that will help fill gaps in the workforce in Washington.

a. The nature of the potential harm to the public if the health profession is not regulated, and the extent to which there is a threat to public health and safety:

By adding CAAs as a regulated health professional in Washington, the state would be expanding the workforce for a field that cannot currently fill positions to meet demand. In a recent survey done by the Washington State Society of Anesthesiologists, nearly all members who responded reported having multiple job positions open for anesthesiologists and most positions had been posted for months without being filled. One of the key barriers to having a sufficient anesthesiologist workforce is the length of time required for their education programs. It typically takes 12-14 years to become a licensed anesthesiologist. In contrast, the CAA education program requires a Bachelor’s degree followed by 24-28 months in a Master’s level program accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP – standards and guidelines attached). Having an education program that takes less time to complete allows more people to access the profession, but the safety and integrity of the position is ensured by having CAAs always work under the direction and supervision of an anesthesiologist. The potential harm to the public of not establishing licensure in Washington so CAAs are legally able to practice is that health facilities will continue to struggle to fill positions, and when there aren’t adequate providers, patient care and medically necessary procedures get delayed.

There is no peer-reviewed or other credible evidence that the care provided by a CAA is less safe than that of a nurse anesthetist. In October of 2018, there was a study (attached) published in the reputable Journal, Anesthesiology, that concluded “The specific composition of the anesthesia care team (whether made up of a physician anesthesiologist and an AA or a physician anesthesiologist and a CRNA) was not associated with any significant differences in mortality, length of stay, or inpatient spending.” Statistics and studies have proven time and time again that patients receive the most comprehensive and highest quality of healthcare when an anesthesia team cares for patients.

b. The extent to which consumers need and will benefit from a method of regulation identifying competent practitioners, indicating typical employers, if any, of practitioners in the health profession:

Adding CAAs to the health care workforce in Washington will help increase the number of providers who can fulfill some of the key functions of an Anesthesia Care Team while working under the direction of an anesthesiologist. According to the [Health Workforce Employment Data](#) from the Workforce Training & Education Coordinating Board, there are 1130 licensed anesthesiologists in Washington, compared to just 657 nurse anesthetists. Without CAAs, health care facilities will continue to face workforce shortages to perform the duties of an Anesthesia Care Team, especially in rural areas.

There are many critical duties of an Anesthesia Care Team that a CAA can perform, including but not limited to:

- Provides anesthesiologist support as a physician extender and part of the patient care team.
- Conducts pre-anesthetic patient history and physicals, which include collecting preoperative consults and data.
- Describes the anesthetic risks, benefits, and options to the patient based on the anesthetic plan approved by the attending physician.
- Pre-tests, calibrates, and monitors anesthesia delivery systems.
- Administers, within authorized limits; maintains; and monitors anesthesia.
- Provides airway skills including: intubations, laryngeal mask airways, nasal/oral airways, and fiber optic bronchoscopy. Also they are qualified and competent at placing invasive lines, regional anesthesia and neuraxial anesthesia.
- Initiates and utilizes multi-parameter monitoring of patients prior to, during, and after anesthesia, or in an intensive care or acute setting (including: electrocardiogram (EKG), capnography, oxygen saturation, direct arterial pressures, central venous pressure, pulmonary artery pressures, arterial blood gas determinations, necessary chemistry panels, temperature, respiration, noninvasive blood pressure, heart rate, ventilatory parameters and additional monitors as directed by an Anesthesiologist).
- Maintains required perioperative documentation.
- Administers cardiovascular or pulmonary supportive drug therapies as necessary.
- Identifies and makes necessary anesthetic adjustments during the intraoperative period.
- Calculates and replaces necessary fluids and blood products.
- Provides safe transition into the post-anesthetic care unit and assists in postoperative pain control.
- Initiates emergency resuscitation by using current advanced cardiac life support guidelines.
- Maintains continuing educational activities and participates in administrative affairs and/or research as directed.

Regulation of CAAs will ensure they meet the education requirements set by the profession to perform these duties, including passing valid professional examination and completing continuing medical education. This will make sure professional competency standards are met that are necessary to ensure the safety of patients.

In multiple states, CAAs were utilized during the Covid Pandemic to assist with the management, breathing device placement and line placement of critically ill patients.

c. *The extent of autonomy a practitioner has, as indicated by:*

i. *The extent to which the health profession calls for independent judgment and the extent of skill or experience required in making the independent judgment*

CAAs train and work under the supervision of anesthesiologists who retain responsibility for the immediate care of the patient. The care team model expands the medical treatment provided by the anesthesiologist and equips the medical facility to serve patients more effectively and efficiently. CAAs are trained extensively in the delivery and maintenance of quality anesthesia care as well as advanced patient monitoring techniques. Under the direction of an anesthesiologist, CAAs perform such tasks as administering drugs, obtaining vascular access, applying and interpreting monitors, establishing and maintaining a patient's airway, and assisting with preoperative assessment.

CAAs follow the plan approved by the supervising anesthesiologist. They use established methods and techniques in gathering patient history; explaining the risks, benefits, and options of anesthesia; administering and monitoring anesthesia; and responding to emergency situations. CAAs may initiate minor deviations to standard practice to meet patient needs during procedures, but major deviations or serious problems are immediately referred to the supervising anesthesiologist.

ii. *The extent to which practitioners are or would be supervised*

CAAs always must work under the supervision and direction of anesthesiologists who retain responsibility for the immediate care of the patient. CAAs' practice encompasses a unique relationship involving the CAA, the anesthesiologist, and the patient. CAAs practice under the medical direction of an anesthesiologist within the Anesthesia Care Team (ACT). Within the ACT, an anesthesiologist and CAA work together to provide high-quality care in the belief that the interests of patient safety are best served with an anesthesiologist's involvement in the delivery of every anesthetic. The responsibility for medical direction lies with the physician anesthesiologist, who may then delegate aspects related to the implementation of an anesthetic plan to the CAA. Delegation of any aspect of patient care to a CAA is at the discretion

of the anesthesiologist, in accordance with established state regulation and local credentialing guidelines. Medical direction should include ongoing communication between the anesthesiologist and the CAA regarding patient care and management.

2. *The efforts made to address the problem:*

a. *Voluntary efforts, if any, by members of the health profession to:*

i. *Establish a code of ethics*

Membership in the American Academy of Anesthesiologist Assistants (AAAA) is a privilege of those CAAs who are dedicated to the basic ethical principles of health care. [Guidelines for the ethical standards of CAAs](#) describe a code of conduct with respect only to a CAA's professional activities.

ii. *Help resolve disputes between health practitioners and consumers*

This is not applicable.

b. *Recourse to and the extent of use of applicable law and whether it could be strengthened to control the problem*

Without licensure and regulation, CAAs are not able to practice in Washington outside of Veterans Affairs facilities. This leaves anesthesiologists at health facilities without the ability to hire CAAs to fill critical job functions such as administering drugs, obtaining vascular access, applying and interpreting monitors, establishing and maintaining a patient's airway, and assisting with preoperative assessment. When looking at these core job functions, regulation and licensure is critical to ensuring the safety of patients under the care of a CAA.

The federal Centers for Medicare and Medicaid Services (CMS) does recognize CAAs as non-physician anesthesia providers, exactly as they recognize nurse anesthetists. Under their guidelines, CMS provides the qualifications for CAAs, the conditions for participation in the Medicare program, and billing guidelines. This is national guidance that covers all 50 states, though CAAs are not able to practice in Washington without licensure.

The only health care facilities in Washington where CAAs are allowed to work are at Veterans Affairs (VA) facilities. Under the VA, the profession of Anesthesiologist Assistant is included as an Allied Health Professional. They provide a [detailed job description for CAAs](#), which includes detailed job functions, an overview of knowledge required by the position, supervisory controls, and more.

Despite this recognition at two different federal level agencies, CAAs are not a licensed and regulated health care provider in Washington. Voluntary efforts to assure the education and competency of CAAs are inadequate and not enforceable. Further, they would leave the safety and wellbeing of patients at risk.

3. *The alternatives considered:*

(a) *Regulation of business employers or practitioners rather than employee practitioners;*

This is not applicable.

(b) *Regulation of the program or service rather than the individual practitioners;*

The practice of anesthesiology is already regulated for related professions including anesthesiologists, certified registered nurse anesthetists, and physician assistants. According to proposed rules from the Washington Medical Commission, only a physician assistant who has completed an accredited anesthesiologist assistant program may administer general or intrathecal anesthesia. Licensure for anesthesiologist assistants is necessary to protect the public interest by increasing access to qualified non-physician anesthesia providers.

(c) *Registration of all practitioners;*

This is not applicable.

(d) *Certification of all practitioners;*

This is not applicable.

(e) *Other alternatives*

Two states (Michigan and Texas) both have delegatory authority for CAAs as opposed to licensure. Delegatory authority may take the form of either recognition and action by the board of medicine or expressed in a delegation enabling statute such as the state's medical practice act. It is well accepted in various medical specialties, including anesthesiology, that the board of medicine may grant a physician the authority to delegate tasks or duties related to the practice of medicine to qualified individuals so long as the physician: 1) remains ultimately responsible to the patient and 2) assures that the individual performing the tasks is qualified to do so. An anesthesiologist seeking to employ CAAs under the principle of delegatory authority should seek input from the board of medicine of their specific state. While this is an approach that these two states have taken, licensure for CAA practice better defines and anchors the practice of CAAs in a state than does the simpler delegatory authority. The 15 other

states and territories that provide authority for CAAs to practice all do so through licensure.

- (f) *Why the use of the alternatives specified in this subsection would not be adequate to protect the public interest;*

Licensing is a critical and necessary step for allowing CAAs to legally perform their duties as health care providers in Washington. [RCW 18.120.020](#) defines licensure as “permission to engage in a health profession which would otherwise be unlawful in the state in the absence of the permission. A license is granted to those individuals who meet prerequisite qualifications to perform prescribed health professional tasks and for the use of a particular title.” In other words, licensure gives individuals express legal authority to practice a health profession, which acts as an endorsement that an individual has met minimum competency, and often includes ongoing learning, renewal, and revocation. Alternatives to licensure would not provide the same level of legal authority and accountability ensuring that CAAs have met, and continue to meet, the defined training qualifications.

- (g) *Why licensing would serve to protect the public interest;*

By establishing licensure for CAAs, the legislature would ensure that there is a more robust workforce to meet the need in Washington. Patients in Washington will benefit from licensure because they can be assured that all members of their Anesthesia Care Team meet the full and ongoing education, training, and testing requirements that are critical to protecting the safety of patients. Importantly, patients will also be assured that they have an anesthesiologist involved in their anesthesia care since CAAs only work under physician anesthesiologist direction. It will also establish the authority to investigate alleged violations of professional standards, and to impose sanctions, or suspend or revoke licenses for those found guilty in an investigation.

4. *The benefit to the public if regulation is granted.*

The public will benefit from well-established education programs to train CAAs. All CAAs possess a premedical background, a Master’s degree, and also complete a comprehensive didactic and clinical program at the graduate school level. CAAs are trained extensively in the delivery and maintenance of quality anesthesia care as well as advanced patient monitoring techniques.

The workforce shortage is a particularly significant barrier in rural parts of the state where finding enough providers can be particularly challenging. Adding CAA licensure in Washington not only provides the opportunity to add to the anesthesia care team workforce, it also increases health care access through the rural “pass through” mechanism, which was created to preserve access to anesthesia services in rural areas (see attached documents). Medicare permits certain low-volume, rural hospitals to pay

for the services of nurse anesthetists and anesthesiologist assistants through a Medicare Part A, cost-based, “pass-through” mechanism. The mechanism is used in lieu of a Part B payment for anesthesia services provided by CAAs and CRNAs. Physician anesthesiologists are not an allowed provider for the pass-through mechanism, so adding CAAs as a licensed provider in Washington has the potential to significantly expand the use of the pass-through mechanism at the 17 rural hospitals in Washington that are eligible for its use. The public would greatly benefit from this as it would increase access in rural areas that often struggle with health care access.

Another benefit to the public of CAA licensure is it would be critical in addressing anesthesiologist position workforce shortages. In a recent WSSA member survey:

- 57% of practices said they were trying to hire anesthesiologists;
- 70% of those hiring said they had positions open for 6 months or longer;
- 75% said they supported licensure for anesthesiologist assistants.

These survey results highlight the workforce shortages that exist. Not having sufficient anesthesiologists in turn puts patients at risk for not receiving adequate care, such as patients not being able to schedule medically necessary surgeries.

a. The extent to which the incidence of specific problems present in the unregulated health profession can reasonably be expected to be reduced by regulation

Licensure and regulation by the state of Washington will provide the public with the assurance that CAAs practicing in this state have the legal authority to do so and that they meet minimal educational and competency requirements. Licensure also ensures competency is maintained through ongoing learning and license renewal, and also ensures accountability through the ability for the state to suspend or revoke a license.

b. Whether the public can identify qualified practitioners

The National Commission for Certification of Anesthesiologist Assistants (NCCAA) provides the certification process for anesthesiologist assistants in the United States. The National Commission's charter includes assuring the public that CAAs meet basic standards related to fund of knowledge and application of that knowledge to the duties of practicing as a CAA. All CAAs must recertify and pass a written exam every 6 years, and they must submit 40 hours of Continuing Medical Education (CME) credits every 2 years. The NCCAA maintains a [national registry of CAAs](#) where members of the public can check to see if a provider is registered.

Because CAAs are not licensed in Washington, there is no regulation or guidelines for them in this state. The proposed licensure legislation would establish a clear means for consumers to identify qualified CAAs and ensure they are able to legally practice in Washington.

c. *The extent to which the public can be confident that qualified practitioners are competent*

i. *Whether the proposed regulatory entity would be a board composed of members of the profession and public members, or a state agency, or both, and, if appropriate, their respective responsibilities in administering the system of registration, certification, or licensure, including the composition of the board and the number of public members, if any; the powers and duties of the board or state agency regarding examinations and for cause revocation, suspension, and nonrenewal of registrations, certificates, or licenses; the promulgation of rules and canons of ethics; the conduct of inspections; the receipt of complaints and disciplinary action taken against practitioners;*

The [Washington Medical Commission \(WMC\)](#) would regulate CAAs, just as they regulate physicians and physician assistants. The WMC establishes, monitors, and enforces qualifications for licensure, consistent standards of practice, and continuing competency. The WMC may approve, deny, or take other disciplinary action upon the application for a license as provided in the Uniform Disciplinary Act ([RCW 18.130](#)).

The WMC will establish an anesthesiologist assistant advisory committee, which will review and make recommendations to the WMC regarding all matters relating to CAAs that come before the WMC, including but not be limited to:

1. Applications for licensure;
2. Anesthesiologist assistant education;
3. Scope of practice;
4. Licensure requirements; and
5. Continuing medical education.

The WMC will consult with [The Board of Osteopathic Medicine and Surgery](#) when investigating allegations of unprofessional conduct against a licensee who has a supervising anesthesiologist license under chapter [RCW 18.57](#).

In addition to being regulated by the WMC, CAAs would be required to be certified by the [National Commission for Certification of Anesthesiologist Assistants \(NCCAA\)](#). The National Commission's charter includes assuring the public that CAAs meet basic standards related to fund of knowledge and application of that knowledge to the duties of practicing as a certified anesthesiologist assistant. The certification process for CAAs includes an initial certifying examination, ongoing registration of continuing medical education, and interval examinations for continued demonstration of qualifications.

- ii. *If there is a grandfather clause, whether such practitioners will be required to meet the prerequisite qualifications established by the regulatory entity at a later date;*

No.

- iii. *The nature of the standards proposed for registration, certification, or licensure as compared with the standards of other jurisdictions;*

The proposed standards for licensure of CAAs are comparable to the standards in other states that have adopted laws regulating CAAs. As of this writing, 15 states, territories, and districts allow and regulate CAAs to work:

- Alabama
- Colorado
- District of Columbia
- Florida
- Georgia
- Indiana
- Kentucky
- Missouri
- New Mexico
- North Carolina
- Ohio
- Oklahoma
- South Carolina
- Vermont
- Wisconsin

In addition, the following states grant practice privilege through physician delegation:

- Michigan
- Texas

- iv. *Whether the regulatory entity would be authorized to enter into reciprocity agreements with other jurisdictions;*

No

- v. *The nature and duration of any training including, but not limited to:*
- *Whether the training includes a substantial amount of supervised field experience; Whether training programs exist in this state; If there will be an experience requirement; Whether the experience must be acquired under a registered, certificated, or licensed practitioner; Whether there are alternative routes of entry or methods of meeting the prerequisite*

qualifications; Whether all applicants will be required to pass an examination; and, If an examination is required, by whom it will be developed and how the costs of development will be met.

CAAs have advanced graduate degrees. All CAAs must complete a comprehensive didactic and clinical program at the graduate school level. CAAs are trained extensively in the delivery and maintenance of quality anesthesia care as well as advanced patient monitoring techniques. Eighty-four percent of current CAA students worked in health care prior to going to school to become a CAA. A majority of them worked in health care for more than 2 years.

Under the Standards and Guidelines for the Accreditation of Educational Programs for the Anesthesiologist Assistant, the curriculum must ensure the achievement of program goals and learning domains. Instruction must be an appropriate sequence of classroom, laboratory, and clinical activities. Instruction must be based on clearly written course syllabi that include course description, course objectives, methods of evaluation, topic outline, and competencies required for graduation. General content areas must include:

1. Those basic medical sciences that are needed as a foundation for the clinical role of the Anesthesiologist Assistant. In particular, the basic science curriculum must include appropriate content in anatomy, biochemistry, physiology, and pharmacology, with particular emphasis on the cardiovascular, respiratory, renal, nervous, and neuromuscular systems.
2. Medical biophysics appropriate to anesthesia practice, including and emphasizing the principles underlying the function of the devices used in anesthesia delivery systems, in life support systems such as ventilators, and in basic and advanced patient monitors.
3. The principles of patient monitoring emphasizing the design, function, and recognition of artifacts and interpretation of data relevant to anesthesia care.
4. The function of lab instruments and interpretation of data obtained from clinical laboratories, cardiac and pulmonary laboratories.
5. The concepts of data analysis as related to the collection, processing, and presentation of basic science and clinical data in medical literature emphasizing methods that support an understanding of clinical decision-making.
6. Patient assessment, including techniques of interviewing to elicit a health history and performing a physical examination at the level appropriate for preoperative, intraoperative, and postoperative anesthetic evaluations.
7. Extensive instruction in the clinical practice of anesthesia and patient monitoring, principally in an operating room setting, but also in preoperative areas, postoperative recovery areas, intensive care units, pain clinics, affiliated clinical laboratories and other supporting services.
8. Clinical quality assurance conferences and literature reviews.

9. Competencies in emergency preparedness consistent with professional standards.

For first year students, the program must set and require a minimum number of clinical hours, and at least annually evaluate and document that the established program minimum is adequate to continue promotion to the second year of the program.

For second and third year students, the program must set and require a minimum number of cases by patient population (including pediatrics, adults, geriatrics, acuity, and subspecialties cases - neuro, obstetrics, cardiac, trauma, out-patient) for each of the required patients and conditions listed in these standards, and at least annually evaluate and document that the established program minimums are adequate to achieve entry-level competency.

Evaluation of CAA students must be conducted on a recurrent basis and with sufficient frequency to provide both the students and program faculty with valid and timely indications of the students' progress toward and achievement of the competencies and learning domains stated in the curriculum.

The goal of CAA education is to guide the transformation of qualified student applicants into competent health care practitioners who aspire to practice in the anesthesia care team. There are thirteen educational programs for CAAs, respectively located at:

- [Case Western Reserve University](#), which offers its AA program at three locations; Cleveland, Ohio, Washington, D.C., Houston, Texas
- [Emory University](#) in Atlanta, Georgia
- [Indiana University](#) in Indianapolis, Indiana
- [Nova Southeastern University](#), which offers its AA program at three locations; Fort Lauderdale, Tampa, and Jacksonville, Florida
- [South University](#) which offers its AA program at two locations; Savannah, Georgia, and Palm Beach, Florida
- [University of Colorado](#) in Denver, Colorado
- [University of Missouri-Kansas City](#) (UMKC)
- [Medical College of Wisconsin](#), Milwaukee

The image below provides a sample CAA curriculum based on the program at the University of Missouri-Kansas City:

Sample CAA Curriculum from the University of Missouri-Kansas City

| Year 1 - Didactic Phase | Year 2 - Clinical Phase |
|---|-------------------------------------|
| Spring | Spring |
| Anatomy for Anesthesiologist Assistants | Anesthesia Clinical Correlation II |
| Professionalism for Anesthesiologist Assistants I | Anesthesia Clinical Experience III |
| Patient Monitoring and Instrumentation | Summer |
| Physiology for Anesthesiologist Assistants I | Anesthesia Clinical Correlation III |
| Introduction to Anesthesia | Anesthesia Clinical Experience IV |
| Orientation to Simulation & Clinical Application | Fall |
| Pharmacology for Anesthesiologist Assistants I | Anesthesia Clinical Correlation IV |
| Research Applications in Medicine | Anesthesia Clinical Experience V |
| Summer | |
| Professionalism for Anesthesiologist Assistants II | |
| Methods of Anesthesia I | |
| Physiology for Anesthesiologist Assistants II | |
| Anesthesia and Coexisting Disease I | |
| Anesthesia Clinical Experience I | |
| Physiological Model-based Simulation I | |
| Fall | |
| Anatomy for the Anesthesiologist Assistant II | |
| Professionalism for Anesthesiologist Assistants III | |
| Anesthesia and Coexisting Disease II | |
| Anesthesia Clinical Experience II | |
| Pharmacology for Anesthesiologist Assistants II | |
| Methods of Anesthesia II | |
| Physiological Model-based Simulation II | |
| | Year 3 - Clinical Phase |
| | Spring |
| | Senior Seminar |
| | Anesthesia Clinical Experience VI |

<http://med.umkc.edu/msa/curriculum/#5518-5528-5538>

Additional curriculum examples are included in attached documents.

- vi. *What additional training programs are anticipated to be necessary to assure training accessible statewide; the anticipated time required to establish the additional training programs; the types of institutions capable of providing the training; a description of how training programs will meet the needs of the expected workforce, including reentry workers, minorities, place-bound students, and others;*

There are not currently any CAA teaching programs in Washington. There is potential opportunity for the two medical schools in Washington (University of Washington and Washington State University) to develop anesthesiologist assistant programs. However, this wouldn't be required or necessary for CAAs to practice in Washington. There are thirteen educational programs for CAAs located throughout the country (listed in previous question) that provide opportunity for CAAs to be trained.

- d. *Assurance of the public that practitioners have maintained their competence:*

The National Commission for Certification of Anesthesiologist Assistants ([NCCAA](#)) provides the certification process for anesthesiologist assistants in the United States. The National Commission's charter includes assuring the public that certified anesthesiologist assistants (CAA) meet basic standards related to fund of knowledge

and application of that knowledge to the duties of practicing as a certified anesthesiologist assistant.

i. Whether the registration, certification, or licensure will carry an expiration date

The certification process for anesthesiologist assistants includes an initial certifying examination, ongoing registration of continuing medical education, and interval examinations for continued demonstration of qualifications.

ii. Whether renewal will be based only upon payment of a fee, or whether renewal will involve reexamination, peer review, or other enforcement

The NCCAA requires ongoing medical education to maintain certification. Additional requirements for renewal and enforcement will likely be determined by the Washington Medical Commission.

5. The extent to which regulation might harm the public:

a. The extent to which regulation will restrict entry into the health profession:

Given CAAs are only allowed to practice at federal Veterans Affairs Facilities in Washington, licensure will not restrict entry into this health profession. Instead it will grow the anesthesia workforce in Washington by enabling them to practice and perform key job functions on Anesthesia Care Teams.

i. Whether the proposed standards are more restrictive than necessary to insure safe and effective performance;

The proposed standards are not more restrictive than necessary to ensure the safe and effective performance of CAAs. CAA licensing requirements will ensure practitioners meet the full and ongoing education, training, and testing requirements necessary to safely perform their duties as a member of an Anesthesia Care Team.

ii. Whether the proposed legislation requires registered, certificated, or licensed practitioners in other jurisdictions who migrate to this state to qualify in the same manner as state applicants for registration, certification, and licensure when the other jurisdiction has substantially equivalent requirements for registration, certification, or licensure as those in this state;

The proposed legislation gives the authority to the Washington Medical Commission to decide this.

- b. *Whether there are similar professions to that of the applicant group which should be included in, or portions of the applicant group which should be excluded from, the proposed legislation.*

No.

6. *The maintenance of standards:*

- a. *Whether effective quality assurance standards exist in the health profession, such as legal requirements associated with specific programs that define or enforce standards, or a code of ethics;*

The American Academy of Anesthesiologist Assistants (AAAA) has established [Guidelines for the ethical standards of CAAs](#), which includes a code of conduct with respect only to a CAA's professional activities.

- b. *How the proposed legislation will assure quality:*

The proposed legislation will assure quality by requiring practitioners who are licensed to perform the job duties of a CAA have demonstrated that they meet the standards established by the profession, including meeting full and ongoing education, training, and testing requirements.

- i. *The extent to which a code of ethics, if any, will be adopted;*

Additional rules will be adopted by the Washington Medical Commission to implement the new license conveyed by the legislature and signed by the Governor.

- ii. *The grounds for suspension or revocation of registration, certification, or licensure;*

The Washington Medical Commission may approve, deny, or take other disciplinary action upon the application for a license as provided in the Uniform Disciplinary Act, [RCW 18.130](#).

7. *(This information is included in the cover sheet.)*

8. *The expected costs of regulation:*

There will be some costs associated with rulemaking activities at the Washington Medical Commission. There is also anticipated to be additional revenue to the state via licensure fees.

- a. *The impact registration, certification, or licensure will have on the costs of the services to the public;*

The cost of licensure is not expected to have a measurable impact on the cost of CAA services to the public, though there is potential that adding CAAs to the health care work force in Washington could lower costs to the public given a hospital or other institution can employ two or three CAAs for the salary of one physician anesthesiologist. Increased use of the ACT could allow hospitals to staff operating rooms more efficiently. Introducing a new category of provider also helps stabilize salaries and health care costs by increasing competition. Additional providers at lower cost will improve access to care for patients, while maintain patient safety. Several states that have licensed CAAs have had physician-only anesthesia groups open up to the ACT, which increases jobs for all providers in the ACT.

- b. *(This information should be provided by the Department of Health.)*

- c. *The cost to the members of the group proposed for regulation for the required education, including projected tuition and expenses and expected increases in training programs, staffing, and enrollments at state training institutions.*

The cost of anesthesiologist assistant education programs varies by institution. Some examples include the following:

- [University of Colorado-Anschutz Medical Campus:](#)

Colorado Resident: \$82,080 / \$684 per credit hour

Non-Resident: \$120,240 / \$1002 per credit hour

Books and Supplies: \$2,500

Memberships: AAAA (\$200 lifetime student membership), ASA (\$25 annually), CSA, COAAA (\$25 annually)

Housing, food and incidentals: \$18,000

Student Health Insurance: \$3,460. Cost is broken down by semesters.

AAAA Annual Conference (attendance highly recommended): \$200 per year plus associated travel costs.

- [Emory University School of Medicine:](#)

Tuition: \$16,933/semester

Emory Student Fees: \$1,009/semester

Books & supplies: \$4,500/program

Moderate Living expenses: \$20,700/year

Permit Parking and Clinical travel: \$2,100

EU Student Health Insurance: \$3,466/year

- [The Medical College of Wisconsin:](#)

Tuition: \$49,140 for years 1 & 2; \$24,570 for year 3

Student Services Fee: \$200 for years 1 & 2; \$100 for year 3

Student Activity Fee: \$300 for years 1 & 2; \$150 for year 3

Technology Fee: \$200 for years 1 & 2; \$100 for year 3

Background Check Fee: \$74

Life/Disability Insurance: \$60.50 year 1; \$66 year 2; \$33 year 3

Single Health Insurance (HMO): \$3,995 for year 1; \$4,358 for year 2;
\$2,179 for year 3

In addition to the cost of the education programs, there are costs associated with the exams required to be certified by the NCCAA. For 2020, the cost of the NCCAA Certifying Examination is approximately \$1,593 and the Continued Demonstration of Qualifications of Anesthesiologist Assistants (CDQ Examination) Exam is \$1,327.

Attachment 1: Standards and Guidelines for Educational Programs

The Anesthesiologist Assistant is prepared to gather patient data, perform patient evaluation, and to administer and document the therapeutic plan that has been formulated for the anesthetic care of the patient. The tasks performed by AAs reflect regional variations in anesthesia practice and state regulatory factors.

Under the direction of a physician anesthesiologist, in agreement with the ASA Statement on the Anesthesia Care Team (ACT) and in accordance with the AAAA Statement on the ACT, the Anesthesiologist Assistant's functions include, but are not limited to, the following:

- a. Obtain an appropriate and accurate preanesthetic health history, perform an appropriate physical examination, and record pertinent data in an organized and legible manner;
- b. Obtain diagnostic laboratory and related studies as appropriate, such as drawing arterial and venous blood samples and any other necessary patient fluids;
- c. Insert and interpret data from invasive monitoring modalities such as arterial lines, pulmonary artery catheterization, and central venous lines, as delegated by the supervising physician anesthesiologist;
- d. Administer anesthetic agents and controlled substances under the direction of a supervising physician anesthesiologist. This includes, but not limited to, administration of induction agents, maintaining and altering anesthesia levels, administering adjunctive treatment and providing continuity of anesthetic care into and during the post-operative recovery period;
- e. Establish and maintain appropriate airway management and provide appropriate ventilatory support;
- f. Apply and interpret advanced monitoring techniques;
- g. Make post-anesthesia patient rounds by recording patient progress notes, compiling and recording case summaries, and by transcribing standing and specific orders;
- h. Evaluate and treat life-threatening situations, such as cardiopulmonary resuscitation, on the basis of established protocols (BLS, ACLS, and PALS);
- i. Perform duties in intensive care units, pain clinics, and other settings, as appropriate;
- j. Train and supervise personnel in the calibration, troubleshooting, and use of patient monitors;
- k. Perform administrative duties in an anesthesiology practice or anesthesiology department, including management of personnel;
- l. Participate in the clinical instruction of others; and
- m. 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 blocks.

I. Sponsorship

A. Sponsoring Education Institution

A sponsoring institution must be at least one of the following:

1. a post-secondary academic institution accredited by an institutional accrediting agency that is recognized by the U.S. Department of Education, and must be authorized under applicable law or other acceptable authority to provide a post-secondary program, which awards a minimum of a master's degree at the completion of the program.

The Anesthesiologist Assistant program must be supported by a Liaison Committee on Medical Education (LCME) accredited school of medicine, or its successor, or supported by an American Osteopathic Association's Commission on Osteopathic College accredited school of medicine, or its successor. The anesthesiology



Commission on Accreditation of Allied Health Education Programs

Standards and Guidelines for the Accreditation of Educational Programs for the Anesthesiologist Assistant

*Essentials/Standards initially adopted
June 1987; revised in 2000, 2001, 2004, 2009, 2016*

**Adopted by the
American Academy of Anesthesiologist Assistants
American Society of Anesthesiologists
Accreditation Review Committee for the Anesthesiologist Assistant
and
Commission on Accreditation of Allied Health Education Programs**

The Commission on Accreditation of Allied Health Education Programs (CAAHEP) accredits programs upon the recommendation of the Accreditation Review Committee for the Anesthesiologist Assistant.

These accreditation **Standards and Guidelines** are the minimum standards of quality used in accrediting programs that prepare individuals to enter the Anesthesiologist Assistant profession. Standards are the minimum requirements to which an accredited program is held accountable. Guidelines are descriptions, examples, or recommendations that elaborate on the Standards. Guidelines are not required, but can assist with interpretation of the Standards.

Standards are printed in regular typeface in outline form. *Guidelines* are printed in italic typeface in narrative form.

Preamble

The Commission on Accreditation of Allied Health Education Programs (CAAHEP), the Accreditation Review Committee for the Anesthesiologist Assistant (ARC-AA), the American Academy of Anesthesiologist Assistants (AAAA), and the American Society of Anesthesiologists (ASA) cooperate to establish, maintain, and promote appropriate standards of quality for educational programs for Anesthesiologist Assistants and to provide recognition of educational programs that meet or exceed the minimum standards outlined in these accreditation **Standards and Guidelines**. Lists of accredited programs are published for the information of students, employers, educational institutions and agencies, and the public.

These **Standards and Guidelines** are to be used for the development, evaluation, and self-analysis of Anesthesiologist Assistant programs. On-site review teams assist in the evaluation of the program's relative compliance with the accreditation Standards.

Description of the Profession

The Anesthesiologist Assistant (AA) is qualified by academic and clinical education to provide anesthetic care under the direction of a qualified physician anesthesiologist. The physician anesthesiologist who is responsible for the Anesthesiologist Assistant is available to prescribe and direct particular therapeutic interventions.

By virtue of the basic medical science education and clinical practice experience, the Anesthesiologist Assistant is proficient in the use of contemporary patient monitoring and interpretation of data in all anesthesia care environments. The Anesthesiologist Assistant provides patient care that allows the supervising physician anesthesiologist to use his or her own medical education more efficiently and effectively.

department jointly with the Anesthesiologist Assistant program must have the educational resources internally or through educational affiliates that would qualify it to meet the criteria of the Accreditation Council for Graduate Medical Education (ACGME), or its successor, for sponsorship of an anesthesiology residency program.

2. a foreign post-secondary academic institution acceptable to CAAHEP that is authorized under applicable law or other acceptable authority to provide a post-secondary program, which awards a minimum of a master's degree or equivalent upon completion of the program.

B. Consortium Sponsor

1. A consortium sponsor is an entity consisting of two or more members that exists for the purpose of operating an educational program. In such instances, at least one of the members of the consortium must meet the requirements of a sponsoring educational institution as described in I.A.
2. The responsibilities of each member of the consortium must be clearly documented in a formal affiliation agreement or memorandum of understanding, which includes governance and lines of authority.

C. Responsibilities of Sponsor

The Sponsor must ensure that the provisions of these **Standards and Guidelines** are met.

II. Program Goals

A. Program Goals and Outcomes

There must be a written statement of the program's goals and learning domains consistent with and responsive to the demonstrated needs and expectations of the various communities of interest served by the educational program. The communities of interest that are served by the program must include, but are not limited to, students, graduates, faculty, sponsor administration, hospital administration, employers, physicians, and the public.

Program-specific statements of goals and learning domains provide the basis for program planning, implementation, and evaluation. Such goals and learning domains must be compatible with the mission of the sponsoring institution(s), the expectations of the communities of interest, and nationally accepted standards of roles and functions. Goals and learning domains are based upon the substantiated needs of health care providers and employers, and the educational needs of the students served by the educational program.

B. Appropriateness of Goals and Learning Domains

The program must regularly assess its goals and learning domains. Program personnel must identify and respond to changes in the needs and/or expectations of its communities of interest.

An advisory committee, which is representative of these communities of interest named in these **Standards**, must be designated and charged with the responsibility of meeting at least annually, to assist program and sponsor personnel in formulating and periodically revising appropriate goals and learning domains, monitoring needs and expectations, and ensuring program responsiveness to change.

Advisory committee meetings may include participation by synchronous electronic means.

C. Minimum Expectations

The program must have the following goal defining minimum expectations: "To prepare competent entry-level Anesthesiologist Assistants in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains."

Programs adopting educational goals beyond entry-level competence must clearly delineate this intent and provide evidence that all students have achieved the basic competencies prior to entry into the field.

Nothing in this standard restricts programs from formulating goals beyond entry-level competence.

III. Resources

A. Type and Amount

Program resources must be sufficient to ensure the achievement of the program's goals and outcomes. Resources must include, but are not limited to: faculty; clerical and support staff; curriculum; finances; offices; classroom, laboratory, and, ancillary student facilities; clinical affiliates; equipment; supplies; computer resources; instructional reference materials; and faculty/staff continuing education.

B. Personnel

The sponsor must appoint sufficient faculty and staff with the necessary qualifications to perform the functions identified in documented job descriptions and to achieve the program's stated goals and outcomes.

The program director must hold an academic appointment with the sponsoring institution. The medical director must hold either an administrative appointment or an academic appointment with the sponsoring institution.

1. Program Director

a. Responsibilities

The program director must assume or delegate the following responsibilities:

- 1) supervise those activities of the faculty and administrative staff that are in direct support of the Anesthesiologist Assistant program;
- 2) organize, administer, continuously review, plan, and develop processes that ensure general effectiveness of didactic education in the program;
- 3) ensure that continuous and competent educational guidance is provided through contact with all entities that participate in the education of the students;
- 4) ensure that continuous and competent medical guidance for the clinically related program components is provided, so that:
 - a) supervised clinical instruction meets current standards of acceptable practice; and
 - b) Anesthesiologist Assistant students learn, develop, and practice the knowledge and skills essential to successful professional interactions with physicians in the medical workplace;
- 5) ensure that continuous and competent educational guidance is provided, so that the didactic demands placed by the clinical educational environment are adequately addressed by classroom curriculum design.

b. Qualifications

The program director must:

- 1) be a certified Anesthesiologist Assistant;
- 2) hold a graduate degree in education, administration, medicine, or the medical basic sciences;
- 3) have the requisite knowledge and skills to administer the classroom/academic aspects of the program; and,
- 4) have the requisite knowledge and skills to administer the operation of the overall program.

The title of program director should not prevent a delegated division of duties or the involvement of educational or operational professionals. Delegated areas of responsibility, as defined by the program director, should exist in a clear organizational structure that facilitates timely review of problems, refinement of processes, and overall advancement of the educational mission of the program.

2. Medical Director

a. Responsibilities

The medical director must:

- 1) organize, administer, continuously review, plan, and develop processes that ensure general effectiveness of clinical education component of the program; and
- 2) Participate in teaching anesthesia practice and/or coursework focusing on principles of medicine.

b. Qualifications

The medical director must:

- 1) be a physician anesthesiologist currently licensed and board certified in anesthesiology; and
- 2) have the requisite knowledge and skills to administer the clinical/academic aspects of the program.

3. Faculty and Instructional Staff

a. Responsibilities

The instructional staff must be responsible for providing instruction, for evaluating students and reporting progress as required by the institution, and for periodically reviewing and updating course materials.

In each location where a student is assigned for didactic or supervised practice instruction, there must be a qualified individual designated to provide that supervision and related frequent assessments of the student's progress in achieving acceptable program requirements.

b. Qualifications

Faculty must be individually qualified by education and experience and must be effective in teaching the subjects assigned. Faculty for the supervised clinical practice portion of the educational program must include a physician alone or a physician with an Anesthesiologist Assistant or a physician with another non-physician anesthesia provider.

Resident physicians may contribute to clinical or didactic instruction. However, the physician faculty roster should be composed predominantly of board certified physician anesthesiologists.

C. Curriculum

1. The curriculum must ensure the achievement of program goals and learning domains. Instruction must be an appropriate sequence of classroom, laboratory, and clinical activities. Instruction must be based on clearly written course syllabi that include course description, course objectives, methods of evaluation, topic outline, and competencies required for graduation.

General content areas must include:

- a. Those basic medical sciences that are needed as a foundation for the clinical role of the Anesthesiologist Assistant. In particular, the basic science curriculum must include appropriate content in anatomy, biochemistry, physiology, and pharmacology, with particular emphasis on the cardiovascular, respiratory, renal, nervous, and neuromuscular systems.
- b. Medical biophysics appropriate to anesthesia practice, including and emphasizing the principles underlying the function of the devices used in anesthesia delivery systems, in life support systems such as ventilators, and in basic and advanced patient monitors.
- c. The principles of patient monitoring emphasizing the design, function, and recognition of artifacts and interpretation of data relevant to anesthesia care.
- d. The function of lab instruments and interpretation of data obtained from clinical laboratories, cardiac and pulmonary laboratories.
- e. The concepts of data analysis as related to the collection, processing, and presentation of basic science and clinical data in medical literature emphasizing methods that support an understanding of clinical decision-making.
- f. Patient assessment, including techniques of interviewing to elicit a health history and performing a physical examination at the level appropriate for preoperative, intraoperative, and postoperative anesthetic evaluations.
- g. Extensive instruction in the clinical practice of anesthesia and patient monitoring, principally in an operating room setting, but also in preoperative areas, postoperative recovery areas, intensive care units, pain clinics, affiliated clinical laboratories and other supporting services.
- h. Clinical quality assurance conferences and literature reviews.
- i. Competencies in emergency preparedness consistent with professional standards.

2. For first year students, the program must set and require minimum number of clinical hours, and at least annually evaluate and document that the established program minimum is adequate to continue promotion to the second year of the program.

For second and third year students, the program must set and require minimum number of cases by patient population (including pediatrics, adults, geriatrics, acuity, and subspecialties cases - neuro, obstetrics, cardiac, trauma, out-patient) for each of the required patients and conditions listed in these **Standards**, and at least annually evaluate and document that the established program minimums are adequate to achieve entry-level competency.

The curriculum should include the content in Appendix B. The suggested curriculum content is based on the AA Practice Analysis conducted in 2014.

D. Resource Assessment

The program must, at least annually, assess the appropriateness and effectiveness of the resources described in these **Standards**. The results of resource assessment must be the basis for ongoing planning and appropriate change. An action plan must be developed when deficiencies are identified in the program resources. Implementation of the action plan must be documented and results measured by ongoing resource assessment.

IV. Student and Graduate Evaluation/Assessment

A. Student Evaluation

1. Frequency and purpose

Evaluation of students must be conducted on a recurrent basis and with sufficient frequency to provide both the students and program faculty with valid and timely indications of the students' progress toward and achievement of the competencies and learning domains stated in the curriculum.

2. Documentation

Records of student evaluations must be maintained in sufficient detail to document learning progress and achievements.

B. Outcomes

1. Outcomes Assessment

The program must periodically assess its effectiveness in achieving its stated goals and learning domains. The results of this evaluation must be reflected in the review and timely revision of the program.

Outcomes assessments must include, but are not limited to: national credentialing examination(s) performance, programmatic retention/attrition, graduate satisfaction, employer satisfaction, job (positive) placement, and programmatic summative measures. The program must meet the outcomes assessment thresholds.

"Positive placement" means that the graduate is employed full or part-time in the profession or in a related field; or continuing his/her education; or serving in the military. A related field is one in which the individual is using cognitive, psychomotor, and affective competencies in the educational program.

2. Outcomes Reporting

The program must periodically submit to the ARC-AA the: program goal(s), learning domains, evaluation systems (including type, cut score, and appropriateness), outcomes, its analysis of the outcomes, and an appropriate action plan based on the analysis.

Programs not meeting the established thresholds must begin a dialogue with the ARC-AA to develop an appropriate plan of action to respond to the identified shortcomings.

V. Fair Practices

A. Publications and Disclosure

1. Announcements, catalogs, publications, and advertising must accurately reflect the program offered.
2. At least the following must be made known to all applicants and students: the sponsor's institutional and programmatic accreditation status as well as the name, mailing address, web site address, and phone number of the accrediting agencies; admissions policies and practices, including technical standards (when used); policies on advanced placement, transfer of credits, and credits for experiential learning; number of credits required for completion of the program; tuition/fees and other costs required to complete the program; policies and processes for withdrawal and for refunds of tuition/fees.
3. At least the following must be made known to all students: academic calendar, student grievance procedure, criteria for successful completion of each segment of the curriculum and graduation, and policies and processes by which students may perform clinical work while enrolled in the program.
4. The sponsor must maintain, and make available to the public, current and consistent summary information about student/graduate achievement that includes the results of one or more of the outcomes assessments required in these **Standards**.

The sponsor should develop a suitable means of communicating to the communities of interest the achievement of student/graduates (e.g. through a website or electronic or printed documents).

B. Lawful and Non-discriminatory Practices

All activities associated with the program, including student and faculty recruitment, student admission, and faculty employment practices, must be non-discriminatory and in accord with federal and state statutes, rules and regulations. There must be a faculty grievance procedure made known to all paid faculty.

C. Safeguards

The health and safety of patients, students, faculty, and other participants associated with the educational activities of the students must be adequately safeguarded.

All activities required in the program must be educational and students must not be substituted for staff.

Anesthesiologist Assistant students must be readily identifiable to patients and clinical co-workers as Anesthesiologist Assistant students.

The intent of the students' patient management experience must always be focused on patient safety while maximizing the educational experience. Students must undertake patient care duties commensurate with their level of competency. The students must at no time be considered the anesthesia provider of record. When students are assigned to any patient care duty, a physician anesthesiologist must be immediately available to provide hands-on care that can affect the patient outcome.

As students approach graduation, the supervising physician anesthesiologist may assign to them an increased level of responsibility for the delivery of anesthesia care to patients commensurate with their demonstrated knowledge, skills, and clinical judgment.

D. Student Records

Satisfactory records must be maintained for student admission, advisement, counseling, and evaluation. Grades and credits for courses must be recorded on the student transcript and permanently maintained by the sponsor in a safe and accessible location.

E. Substantive Change

The sponsor must report substantive change(s) as described in Appendix A to CAAHEP/ARC-AA in a timely manner. Additional substantive changes to be reported to ARC-AA within the time limits prescribed include:

1. Change in relationship with the school of medicine; and
2. Change in relationship with the Department of Anesthesiology affiliations.

F. Agreements

There must be a formal affiliation agreement or memorandum of understanding between the sponsor(s) and all other entities that participate in the education of the students describing the relationship, role, and responsibilities between the sponsor and that entity.

Appendix A

Application, Maintenance and Administration of Accreditation

A. Program and Sponsor Responsibilities

1. Applying for Initial Accreditation

- a. The chief executive officer or an officially designated representative of the sponsor completes a "Request for Accreditation Services" form and returns it electronically or by mail to:

ARC-AA
N84W33137 Becker Ln
Oconomowoc, WI 53066

The "Request for Accreditation Services" form can be obtained from the CAAHEP website at <https://www.cognitofrms.com/CAAHEP2/RequestForAccreditationServices>.

Note: There is **no** CAAHEP fee when applying for accreditation services; however, individual committees on accreditation may have an application fee.

- b. The program undergoes a comprehensive review, which includes a written self-study report and an on-site review.

The self-study instructions and report form are available from the ARC-AA. The on-site review will be scheduled in cooperation with the program and ARC-AA once the self-study report has been completed, submitted, and accepted by the ARC-AA.

2. Applying for Continuing Accreditation

- a. Upon written notice from the ARC-AA, the chief executive officer or an officially designated representative of the sponsor completes a "Request for Accreditation Services" form, and returns it electronically or by mail to:

ARC-AA
N84W33137 Becker Ln
Oconomowoc, WI 53066

The "Request for Accreditation Services" form can be obtained from the CAAHEP website at <https://www.cognitofrms.com/CAAHEP2/RequestForAccreditationServices>.

- b. The program may undergo a comprehensive review in accordance with the policies and procedures of the ARC-AA.

If it is determined that there were significant concerns with the conduct of the on-site review, the sponsor may request a second site visit with a different team.

After the on-site review team submits a report of its findings, the sponsor is provided the opportunity to comment in writing and to correct factual errors prior to the ARC-AA forwarding a recommendation to CAAHEP.

3. Administrative Requirements for Maintaining Accreditation

- a. The program must inform the ARC-AA and CAAHEP within a reasonable period of time (as defined by the ARC-AA and CAAHEP policies) of changes in chief executive officer, dean of health professions or equivalent position, and required program personnel (Refer to Standard III.B.).
- b. The sponsor must inform CAAHEP and the ARC-AA of its intent to transfer program sponsorship. To begin the process for a Transfer of Sponsorship, the current sponsor must submit a letter (signed by the CEO or

designated individual) to CAAHEP and the ARC-AA that it is relinquishing its sponsorship of the program. Additionally, the new sponsor must submit a "Request for Transfer of Sponsorship Services" form. The ARC-AA has the discretion of requesting a new self-study report with or without an on-site review. Applying for a transfer of sponsorship does not guarantee that the transfer will be granted.

- c. The sponsor must promptly inform CAAHEP and the ARC-AA of any adverse decision affecting its accreditation by recognized institutional accrediting agencies and/or state agencies (or their equivalent).
- d. Comprehensive reviews are scheduled by the ARC-AA in accordance with its policies and procedures. The time between comprehensive reviews is determined by the ARC-AA and based on the program's on-going compliance with the Standards, however, all programs must undergo a comprehensive review at least once every ten years.
- e. The program and the sponsor must pay ARC-AA and CAAHEP fees within a reasonable period of time, as determined by the ARC-AA and CAAHEP respectively.
- f. The sponsor must file all reports in a timely manner (self-study report, progress reports, probation reports, annual reports, etc.) in accordance with ARC-AA policy.
- g. The sponsor must agree to a reasonable on-site review date that provides sufficient time for CAAHEP to act on a ARC-AA accreditation recommendation prior to the "next comprehensive review" period, which was designated by CAAHEP at the time of its last accreditation action, or a reasonable date otherwise designated by the ARC-AA.

Failure to meet any of the aforementioned administrative requirements may lead to administrative probation and ultimately to the withdrawal of accreditation. CAAHEP will immediately rescind administrative probation once all administrative deficiencies have been rectified.

4. Voluntary Withdrawal of a CAAHEP- Accredited Program

Notification of voluntary withdrawal of accreditation from CAAHEP must be made by the Chief Executive Officer or an officially designated representative of the sponsor by writing to CAAHEP indicating: the desired effective date of the voluntary withdrawal, and the location where all records will be kept for students who have completed the program.

5. Requesting Inactive Status of a CAAHEP- Accredited Program

Inactive status for any accredited program may be requested from CAAHEP at any time by the Chief Executive Officer or an officially designated representative of the sponsor writing to CAAHEP indicating the desired date to become inactive. No students can be enrolled or matriculated in the program at any time during the time period in which the program is on inactive status. The maximum period for inactive status is two years. The sponsor must continue to pay all required fees to the ARC-AA and CAAHEP to maintain its accreditation status.

To reactivate the program, the Chief Executive Officer or an officially designated representative of the sponsor must provide notice of its intent to do so in writing to both CAAHEP and the ARC-AA. The sponsor will be notified by the ARC-AA of additional requirements, if any, that must be met to restore active status.

If the sponsor has not notified CAAHEP of its intent to re-activate a program by the end of the two-year period, CAAHEP will consider this a "Voluntary Withdrawal of Accreditation."

B. CAAHEP and Committee on Accreditation Responsibilities – Accreditation Recommendation Process

1. After a program has had the opportunity to comment in writing and to correct factual errors on the on-site review report, the ARC-AA forwards a status of public recognition recommendation to the CAAHEP Board of Directors. The recommendation may be for any of the following statuses: initial accreditation, continuing accreditation, transfer of sponsorship, probationary accreditation, withhold of accreditation, or withdrawal of accreditation.

The decision of the CAAHEP Board of Directors is provided in writing to the sponsor immediately following the CAAHEP meeting at which the program was reviewed and voted upon.

2. Before the ARC-AA forwards a recommendation to CAAHEP that a program be placed on probationary accreditation, the sponsor must have the opportunity to request reconsideration of that recommendation or to request voluntary withdrawal of accreditation. The ARC-AA reconsideration of a recommendation for probationary accreditation must be based on conditions existing both when the committee arrived at its recommendation as well as on subsequent documented evidence of corrected deficiencies provided by the sponsor.

The CAAHEP Board of Directors' decision to confer probationary accreditation is not subject to appeal.

3. Before the ARC-AA forwards a recommendation to CAAHEP that a program's accreditation be withdrawn or that accreditation be withheld, the sponsor must have the opportunity to request reconsideration of the recommendation, or to request voluntary withdrawal of accreditation or withdrawal of the accreditation application, whichever is applicable. The ARC-AA reconsideration of a recommendation of withdraw or withhold accreditation must be based on conditions existing both when the ARC-AA arrived at its recommendation as well as on subsequent documented evidence of corrected deficiencies provided by the sponsor.

The CAAHEP Board of Directors' decision to withdraw or withhold accreditation may be appealed. A copy of the CAAHEP "Appeal of Adverse Accreditation Actions" is enclosed with the CAAHEP letter notifying the sponsor of either of these actions.

At the completion of due process, when accreditation is withheld or withdrawn, the sponsor's Chief Executive Officer is provided with a statement of each deficiency. Programs are eligible to re-apply for accreditation once the sponsor believes that the program is in compliance with the accreditation Standards.

Note: Any student who completes a program that was accredited by CAAHEP at any time during his/her matriculation is deemed by CAAHEP to be a graduate of a CAAHEP-accredited program.

APPENDIX B
Guidelines for Curriculum Didactic and Clinical Content

A. *PHYSIOLOGY (Applied and General)*

1. *Neuromuscular physiology*
 - a. *Physiology of the neuron*
 - b. *Anatomy of the neuromuscular junction*
 - c. *Membrane and action potentials*
 - d. *Excitation and contraction of the smooth muscle*
 - e. *Neuromuscular blockade and transmission*
 - f. *Malignant hyperthermia*
2. *Nervous system*
 - a. *Organization of the nervous system*
 - b. *Peripheral and central nervous system*
 - c. *Physiology of neurons and synapses*
 - d. *Characteristics of synaptic transmission*
 - e. *Sensory receptors*
 - f. *Nerve fibers that transmit different types of signals and their physiologic classification*
 - g. *Spatial and temporal summation*
3. *Autonomic nervous system*
 - a. *Sympathetic nervous system*
 - i. *Anatomy of the sympathetic nervous system*
 - ii. *Sympathetic neurotransmission and catecholamine physiology*
 - iii. *Adrenergic receptors*
 - b. *Parasympathetic nervous system*
 - i. *Anatomy of the parasympathetic nervous system*
 - ii. *Parasympathetic neurotransmission*
 - iii. *Cholinergic receptors*
4. *Central nervous system*
 - a. *Neuroanatomy of spine and spinal cord*
 - i. *Cranial nerves*
 - ii. *Motor functions of the spinal cord and cord reflexes*
 - iii. *Cerebrospinal fluid*
 - a. *Cerebral blood flow and metabolism*
 - iv. *Intracranial pressure*
 - a. *Head trauma, psychiatric illness, and cerebrovascular disorders*
5. *Cardiac physiology*
 - a. *Electrophysiology and conduction pathways*
 - i. *Mechanisms of heart rate control and ventricular action potentials*
 - ii. *Specialized excitatory and conductive systems*
 - iii. *Control of excitation and conduction*
 - iv. *Electrocardiographic interpretation*
 - b. *Determinants of cardiac output and systemic arterial blood pressure*
 - i. *Preload, afterload, and contractility*
 - ii. *Cardiac output, venous return and their regulation*
 - iii. *Frank – Starling Mechanism*
 - c. *Left ventricular pressure-volume relationships*
 - d. *Ventricular function curves*
 - e. *Treatment of intra-operative ischemia and coronary artery disease*
 - f. *Subvalvular aortic stenosis*
 - g. *Cardiac arrhythmias*
6. *Circulatory physiology*
 - a. *Microcirculation, lymphatics, capillary fluid exchange, interstitial fluid*

- b. *Local and humoral control of blood flow by the tissues*
7. *Blood and Hemostasis*
 - a. *Platelet aggregation and coagulation cascade*
 - b. *Fibrinolysis, plasmin, and coagulation tests*
 - c. *Disorders of coagulation*
 - d. *Transfusion therapy*
 8. *Respiratory physiology*
 - a. *Anatomy of the larynx*
 - b. *Gas diffusion and partial pressures*
 - c. *Oxygen and carbon dioxide carriage by blood*
 - i. *Oxygen dissociation curves and abnormalities*
 - d. *Control of ventilation*
 - i. *Respiratory centers and sensory pathways*
 - e. *Pulmonary mechanics*
 - i. *Ventilation: perfusion relationships*
 - ii. *Hypoxic pulmonary vasoconstriction and one-lung ventilation*
 - f. *Pulmonary function tests*
 - i. *Flow volume loops*
 - ii. *Airway closure and closing capacity*
 - iii. *Blood gas physiology*
 - g. *Chronic and acute respiratory pathophysiology*
 - i. *Restrictive and obstructive diseases*
 - ii. *OSA*
 9. *Body fluid, electrolytes and the kidney*
 - a. *Fluid compartments*
 - b. *Fluid management*
 - c. *Anatomy of the nephron and vascular supply*
 - d. *Physiology of urine formation*
 - e. *Regulation of fluid volume and osmolality*
 - f. *Intra- and extra-cellular fluids*
 - g. *Renal tubular control of electrolyte balance*
 - h. *Renal failure and fluid-electrolyte disturbances*
 - i. *Acid-base balance and disturbances*
 10. *Endocrine physiology*
 - a. *Thyroid and adrenal physiology*
 - b. *Insulin, glucagon and somatostatin*
 - c. *Parathyroid hormone and calcitonin*
 - d. *Endocrine disorders*
 11. *Hepatic physiology*
 - a. *Hepatic anatomy and vascular physiology*
 - b. *Hepatic disease*
 12. *Physiology of pregnancy*
 - a. *Pathophysiology of the uterus and the placenta*
 - b. *Parturition*
 - c. *Pharmacological alterations*
 13. *Fetal and neonatal physiology*
 - a. *Cardiopulmonary system*
 - b. *Fluid balance*
 - c. *Renal and hepatic function*

B. PHARMACOLOGY

1. *Pharmacokinetics and pharmacodynamics*
 - a. *Absorption, distribution, metabolism, and excretion*
 - b. *Drug-receptor interactions*
 - c. *Weak acids and weak bases*
2. *Inhalational anesthetics*
3. *Intravenous anesthetics*
4. *Opioids*
 - a. *Pharmacology of opioid agonists and antagonists*
 - b. *Central and peripheral administration of opioids*
 - c. *Pain pathways*
 - i. *Peripheral afferents and pain conduction*
 - ii. *Classification of pain*
 - iii. *Mechanism of analgesia*
 - iv. *Modulation of pain*
 - v. *Spinal and supraspinal analgesia*
5. *Neuromuscular blocking agents*
 - a. *Depolarizing and non-depolarizing agents*
 - b. *Interactions with neuromuscular blockers*
 - c. *Reversal of neuromuscular blockade*
6. *Drugs acting on the autonomic nervous system*
 - a. *Sympathetic nervous system*
 - i. *Clinical use of catecholamines and synthetic non-catecholamines*
 - ii. *Effects of adrenergic agonists and antagonists*
 - iii. *Centrally and peripherally acting sympathetic nervous system agents*
 - b. *Parasympathetic nervous system*
 - i. *Cholinergic agonists and antagonists*
7. *Local anesthetics*
 - a. *Structure activity relationships*
 - b. *Metabolism*
 - c. *Management of toxicity syndrome*
8. *Calcium channel blockers*
9. *Cardiac antidysrhythmic drugs*
10. *Cardiac glycosides and related drugs*
11. *Antihypertensives and vasoactive agents*
12. *Antihistaminergic drugs and autacoids*
13. *Antimicrobial pharmacology*
14. *Steroids*
15. *NSAIDs*
16. *Hormones*
17. *Hemostatic agents*
 - a. *Anticoagulants, antifibrinolytics, and thrombin inhibitors*

18. *Diuretics*
 - a. *Mechanisms of action and side effects*
19. *Gastrointestinal pharmacology*
 - a. *Antacids and prokinetics*
20. *Antiemetics*
21. *Insulin and oral hypoglycemic agents*
22. *Antiseizure drugs*
23. *Math for calculating concentrations*
24. *Drug-drug interactions and toxicities*
25. *Drug allergies*

C. ANESTHESIA EQUIPMENT

1. *Anesthesia delivery systems*
2. *Gases, gas containers, and piping systems*
3. *Anatomy of the anesthesia machine*
4. *Vaporizing liquid anesthetic agents*
5. *Breathing circuits*
 - a. *Open, semi-open, closed, semi-closed breathing systems*
 - b. *Time constants*
6. *Anesthesia ventilators*
7. *Scavenging waste gases and controlling pollution*
8. *Oxygen delivery and ventilation during MAC, transport, and MRI*
9. *Ultrasound*

D. INSTRUMENTATION & MONITORING

1. *Assess, interpret, and respond to changes in patient monitoring*
 - a. *ECG*
 - i. *ECG in relation to mechanical and electrical events of the heart*
 - ii. *Intervals and QRS nomenclature*
 - iii. *Atrial and ventricular arrhythmias and conduction abnormalities*
 - b. *Non-invasive monitoring*
 - i. *Blood pressure*
 - ii. *Transesophageal echocardiography (e.g., PFT, ECHO)*
 - iii. *Doppler and ultrasonic imaging*
 - iv. *Cardiac output*
 - c. *Oxygen monitoring, oximetry and plethysmography*
 - d. *Capnography & respiratory gas analysis*
 - e. *Monitoring the neuromuscular junction*
 - f. *Invasive monitoring principles and techniques*
 - i. *Peripheral arterial pressure waveforms and monitoring*
 - ii. *Pulmonary artery pressure and monitoring*
 - iii. *Central venous pressure and monitoring*

- iv. Intracranial pressure monitoring
 - v. Cardiac output measurement
 - g. Temperature control and monitoring
 - i. Body and fluid warming devices
 - h. Fetal Monitoring
 - i. Arterial blood gas analysis
 - j. EEG, processed EEGs, and evoked potentials
 - k. Point of care devices
- 2. Cardiovascular support devices
 - a. Pacemakers and AICDs
 - b. Ventricular assist devices and cardiopulmonary bypass
- 3. Blood salvage and rapid infusion devices

E. PHYSICS

1. Units of measurement, dimensional analysis review of special functions, physical concepts and mathematical tools
2. Pressure, tension, and vacuum
3. Flow, resistance, power and work
4. Partial pressures and solubility
5. Diffusion and osmosis
6. Gas laws, cylinders, and transport processes
7. Vaporization and humidification
8. Physiologic signals and electrical analogs
9. Electrical circuits and physiologic analogs
 - a. Pressure/voltage, flow/current, resistance
 - b. Direct and alternating current sources
 - c. Series, parallel and series-parallel circuits
 - d. Capacitors and inductors – time constants
 - e. Impedance
 - f. Transformers
10. Principles of lasers, fires, explosions and radiation
 - a. Electrocautery and laser technology

F. AIRWAY MANAGEMENT

1. Airway anatomy and physiology
2. Airway management equipment (e.g., fiberoptic and glide scopes, LMA, DLT)
3. Evaluation of the airway
4. Techniques for intubation & extubation
5. The difficult airway
6. Pediatric and advanced airway management
7. Ventilation assist devices (e.g., BiPAP, CPAP)

G. METHODS OF ANESTHESIA (e.g., general, regional, MAC, TIVA)

1. *Regional anesthesia*
 - a. *Neuraxial blockade*
 - b. *Peripheral nerve blockade*
 - c. *Intravenous regional anesthesia*
 - d. *Complications and techniques*
 - e. *Drug regimens for epidural and spinal anesthetics*
2. *Monitored anesthesia care*
 - a. *Unique challenges of diverse sedation management techniques and locations*
3. *Positioning*
 - a. *Considerations related to safe positioning in regard to surgical and anesthesia implications (e.g., lithotomy, sitting craniotomy, beach chair, brachial plexus, extremity neuropathy, prone facial/ocular, ventilation perfusion mis-match)*
4. *Obstetric anesthesia*
 - a. *Physiologic changes of the parturient*
 - b. *Fetal and placental physiology*
 - c. *General and regional anesthesia during pregnancy*
 - d. *Stages of labor and pain pathways*
 - e. *Management of the complicated pregnancy*
5. *Pediatric anesthesia*
 - a. *Pediatric physiology and anatomy*
 - b. *Pediatric congenital anomalies (cardiovascular and developmental)*
 - c. *Pharmacodynamics and kinetics of the pediatric patient*
 - d. *Airway management of the pediatric patient*
6. *Geriatric anesthesia*
 - a. *Physiologic and pharmacologic changes of aging*
7. *Neurosurgical anesthesia*
8. *Cardiac anesthesia*
9. *Trauma anesthesia*

H. ANESTHESIA MANAGEMENT

1. *Preoperative Assessment*
 - a. *preoperative evaluation and assessment techniques*
 - i. *Lab value assessment*
 - ii. *Physical exam*
 - iii. *Patient interview*
 - iv. *NPO guidelines*
 - v. *Anesthesia plan formulation*
 - vi. *Special tests (e.g., PFT, ECHO)*
 - b. *Imaging*
2. *Intraoperative Management*
 - a. *Communication with perioperative team*
 - i. *Timeout*
 - ii. *Care transitions or handoffs*
 - b. *Intraoperative complications/critical events*
 - i. *Hazards (e.g., airway fires, burns, electrical)*
 - c. *Changes in patient physiology*
 - d. *Documentation/charting*

- e. *Perioperative pain management*
- 3. *Postoperative management*
 - a. *Patient care transfer to PACU, ICU, etc.*
 - b. *Acute pain management strategies*
 - c. *Post-operative complications*

I. INFECTION CONTROL

- 1. *Universal precautions*
 - a. *PPEs*
 - b. *Hand hygiene*
 - c. *Scrubbing and gowning*
- 2. *Surgical site infection prevention protocols (e.g., prophylactic antibiotic treatment, sterile technique)*

J. CLINICAL PRACTICE MANAGEMENT AND DEVELOPMENT

- 1. *ASA Practice Guidelines*
- 2. *ASA Standards of Care*
- 3. *Professional organizations in the field (e.g., ARC-AA, AAAA, NCCAA, ASA)*
- 4. *QA/QI process*
- 5. *Evidence-based case study analysis*
- 6. *Provision of high quality cost-effective care*
- 7. *Professional practice standards*
- 8. *Role of the Anesthesia Care Team*
- 9. *Cardiopulmonary Resuscitation*
- 10. *Situational awareness*
- 11. *Patient safety guidelines*
- 12. *Non-operating room anesthesia*

K. PROFESSIONALISM

- 1. *Truthfulness and transparency*
- 2. *Patient sensitivity, empathy, accountability, respect*
- 3. *Ethics in anesthesia*
- 4. *Advocacy*

L. PROVIDER WELLNESS

- 1. *Occupational health*
 - a. *Infection from patients*
 - b. *Exposure to anesthetic agents*
- 2. *Practitioner personal wellness*

- a. Stress management
- b. Managing challenging outcomes
- c. Dependency

M. CLINICAL CONTENT OUTLINE

| | |
|--|------|
| Total Anesthesia Cases | 600 |
| Total Hours Clinical Anesthesia | 2000 |
| Patient ASA Class III & IV | |
| Patient ASA Class III & IV | 150 |
| Emergent (ASA Class E) | 30 |
| Trauma Cases | 5 |
| Ambulatory | 100 |
| Patient Population | |
| Geriatric (65 + years) | 100 |
| Pediatric (0 - 18)* | 50 |
| Anatomical Location Surgery | |
| Intra-abdominal | 75 |
| Intracranial | 5 |
| Head & Neck | 20 |
| Intrathoracic | 20 |
| Heart | 10 |
| Lung | 10 |
| Obstetrical Cases (including Deliveries, C-Sect & Procedures) | 35 |
| Vascular | 15 |
| Methods of Anesthesia | |
| General Anesthesia | 400 |
| Induction, Maintenance & Emergence | |
| Mask Induction | 35 |
| Mask Management | 30 |
| Supraglottic Airway Device | 35 |
| Tracheal Intubation | 255 |
| Oral | 250 |
| Nasal | 5 |
| Total Intravenous Anesthesia | 10 |
| Emergence from Anesthesia | 250 |
| Regional Techniques | |
| Management/Administration | 40 |
| Monitored Anesthesia Care | 30 |

| Other Anesthetic Management | |
|--|-----|
| <i>Alternative Airway Management</i> | |
| <i>Fiberoptic Intubation, Light Wand, etc. (all airway techniques other than direct laryngoscopy and supraglottic airway device)</i> | 10 |
| <i>Arterial Technique</i> | |
| <i>Arterial Puncture/Catheter Insertion</i> | 25 |
| <i>Intra-arterial BP monitoring</i> | 30 |
| <i>Central Venous Pressure Catheter</i> | |
| <i>Placement</i> | 5 |
| <i>Monitoring</i> | 15 |
| Other | |
| <i>Intravenous Catheter Placement</i> | 125 |
| <i>Gastric Tube Placement</i> | 5 |
| <i>Placement of One Lung Isolation Device</i> | 5 |

Attachment 2: Anesthesia Team Study

Anesthesia Care Team Composition and Surgical Outcomes

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This article has been selected for the ANESTHESIOLOGY CME Program. Learning objectives and disclosure and ordering information can be found in the CME section at the front of this issue.

ABSTRACT

Background: In the United States, anesthesia care can be provided by an anesthesia care team consisting of nonphysician providers (nurse anesthetists and anesthesiologist assistants) working under the supervision of a physician anesthesiologist. Nurse anesthetists may practice nationwide, whereas anesthesiologist assistants are restricted to 16 states. To inform policies concerning the expanded use of anesthesiologist assistants, the authors examined whether the specific anesthesia care team composition (physician anesthesiologist plus nurse anesthetist or anesthesiologist assistant) was associated with differences in perioperative outcomes.

Methods: A retrospective analysis was performed of national claims data for 443,098 publicly insured elderly (ages 65 to 89 yr) patients who underwent inpatient surgery between January 1, 2004, and December 31, 2011. The differences in inpatient mortality, spending, and length of stay between cases where an anesthesiologist supervised an anesthesiologist assistant compared to cases where an anesthesiologist supervised a nurse anesthetist were estimated. The approach used a quasirandomization technique known as instrumental variables to reduce confounding.

Results: The adjusted mortality for care teams with anesthesiologist assistants was 1.6% (95% CI, 1.4 to 1.8) versus 1.7% for care teams with nurse anesthetists (95% CI, 1.7 to 1.7; difference -0.08 ; 95% CI, -0.3 to 0.1 ; $P = 0.47$). Compared to care teams with nurse anesthetists, care teams with anesthesiologist assistants were associated with non-statistically significant decreases in length of stay (-0.009 days; 95% CI, -0.1 to 0.1 ; $P = 0.89$) and medical spending ($-\$56$; 95% CI, -334 to 223 ; $P = 0.70$).

Conclusions: The specific composition of the anesthesia care team was not associated with any significant differences in mortality, length of stay, or inpatient spending. (ANESTHESIOLOGY 2018; 129:700-9)

IN an effort to increase access and reduce healthcare spending, policymakers and researchers are considering alternative care models, such as the expanded use of nonphysician providers (e.g., nurse practitioners and nurse anesthetists).¹⁻⁴ Increasing the use of nonphysician providers could reduce costs because, in many settings, they are paid less than physicians for similar services.⁵ In addition, in the face of predicted physician shortages^{6,7} the expanded use of nonphysician providers could increase access, particularly in underserved areas where physician recruitment is challenging,⁸ although whether and to what extent there are shortages in the anesthesia workforce are unclear.⁹ However, these potential benefits could be mitigated or even reversed if nonphysician providers are associated with lower quality care and/or more expensive practice patterns.¹⁰ Legislation governing whether and how nonphysician providers are allowed to provide patient care (e.g., scope of practice laws) is typically determined at the state level in the United States, and alteration of existing legislation is the subject of intense legislative debate in many states.

Editor's Perspective

What We Already Know about This Topic

- Both nurse anesthetists and anesthesiologist assistants work together with physician anesthesiologists as part of care teams
- It is unknown whether the specific anesthesia care team composition (physician anesthesiologist plus nurse anesthetist or anesthesiologist assistant) is associated with differences in perioperative outcomes

What This Article Tells Us That Is New

- Using national claims data for 443,000 Medicare beneficiaries, the influence of care team composition on inpatient mortality, inpatient length of stay, and inpatient spending was evaluated
- There were no significant differences in mortality, length of stay, or inpatient spending between the care team models

There are three types of anesthesia providers in the United States: anesthesiologists, who are physicians trained in the specialty of anesthesiology; nurse anesthetists; and

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anesthesiologist assistants. Nurse anesthetists are nurses who receive additional training in anesthesiology through a nurse anesthetist school. Like physician assistants more generally, anesthesiologist assistants receive training in anesthesiology through an anesthesiologist assistant program at one of 11 universities. The main differences between the two groups fall into three areas: training, licensure, and scope of practice. Both nurse anesthetists and anesthesiologist assistants obtain advanced training in anesthesiology, but nurse anesthetist schools typically require candidates to have a Bachelor of Science in nursing, professional nursing experience, and a valid nursing license. By contrast, anesthesiologist assistant programs allow for any bachelor's degree, as long as certain course requirements are met. Licensure and certification requirements for nurse anesthetists are established by the state nursing board, whereas the state medical board is responsible for licensure and certifying anesthesiologist assistants.

Finally, there are differences in state-level legislation (*i.e.*, scope of practice laws) controlling whether and how anesthesiologist assistants and nurse anesthetists may provide patient care. Current laws allow for nurse anesthetist practice in all 50 states, whereas anesthesiologist assistants may practice in only 16 states and the District of Columbia. In addition, anesthesiologist assistants always provide care under the supervision of an anesthesiologist. For nurse anesthetists, the situation is more complex. In states that have not chosen to “opt out” of federal regulations requiring physician supervision of nurse anesthetists, nurse anesthetists must practice under the supervision of a physician, although not necessarily an anesthesiologist. In states that have opted out of federal regulations requiring physician supervision of nurse anesthetists (see appendix table A.1 in the Supplemental Digital Content, <http://links.lww.com/ALN/B729>), nurse anesthetists have the *de jure* ability to practice without any physician supervision, although even in these states, *de facto* supervision is common,¹¹ particularly because hospitals, insurers, patients, and surgeons may impose additional restrictions limiting the ability of nurse anesthetists to practice independently. The scope of practice laws that define the legal ability of nurse anesthetists and anesthesiologist assistants to provide care remain contested at the state level. For example, as of 2013, 17 states had chosen to opt out of federal regulations requiring physician supervision of nurse anesthetists, and the decision to opt out remains contentious in the remaining states.

Although opt out concerns the regulation of nurse anesthetists, in this article, we focus on scope of practice laws governing the use of anesthesiologist assistants. As previously noted, current legislation permits anesthesiologist assistant practice in 16 of 50 states and the District of Columbia, and there are ongoing efforts to increase the number of states where anesthesiologist assistants may practice. Arguments against expanding the number of states where anesthesiologist assistants may practice generally focus on the possibility that health outcomes may be worse when anesthesiologist assistants provide anesthesia care. Although the differences

in training and background between nurse anesthetists and anesthesiologist assistants may make this a theoretical possibility, it should be noted that generally, nurse anesthetists and anesthesiologist assistants practice in the setting of an anesthesia care team consisting of a physician anesthesiologist who supervises a nurse anesthetist or anesthesiologist assistant. Thus, the presence of the supervising physician could mitigate any systemic differences in background and training between anesthesiologist assistants and nurse anesthetists.

Ultimately, whether anesthesia care teams with anesthesiologist assistants have poorer outcomes than care teams with nurse anesthetists is an empirical question, and to date, there have been no large-scale studies examining differences in outcomes between anesthesiologist assistants and nurse anesthetists.¹² Understanding whether the specific composition of the anesthesia care team (physician anesthesiologist plus nurse anesthetist or physician anesthesiologist plus anesthesiologist assistant) is associated with differences in outcomes could inform efforts to expand the number of states where anesthesiologist assistants can practice. Moreover, it could also help inform the broader debate over the proper regulation of nonphysician providers. In this study, we used a large data set of administrative health claims to evaluate the hypothesis that there would be differences in outcomes (mortality, length of stay, and costs) between care teams consisting of physician anesthesiologists and anesthesiologist assistants compared to care teams consisting of physician anesthesiologists and nurse anesthetists.

Materials and Methods

Data

The data used for this study consisted of health insurance claims for a random 20% sample of U.S. Medicare beneficiaries enrolled in the traditional fee-for-service Medicare plan. In the United States, Medicare is a public insurance program that primarily provides health insurance for the elderly (persons 65 yr or older), although the program also covers some younger persons with significant disabilities and those with end-stage renal disease. In 2010, more than 80% of Medicare beneficiaries consisted of persons ages 65 yr and older.¹³ Generally speaking, Medicare beneficiaries can choose from either a traditional fee-for-service plan, for which the federal agency administering Medicare—the Centers for Medicare and Medicaid Services—is the primary payer, or they can choose to be enrolled in a managed healthcare plan. With the latter, Medicare essentially subcontracts out the provision of health care to private health insurers, who bear all the costs for an individual's care. Roughly two thirds of Medicare beneficiaries are enrolled in the traditional fee-for-service plan.¹⁴ Health insurance claims data for beneficiaries enrolled in the traditional fee-for-service Medicare plan are available for researchers upon approval of a data use agreement with the Centers for Medicare and Medicaid Services and payment of required fees. The Medicare data are highly detailed and include information such as admission and

discharge dates, discharge diagnosis codes that can be used to identify patient comorbidities, codes for any surgical procedures that were performed, and the total amounts spent during a given admission.

Sample

To construct our sample, we began by using the inpatient file to identify all inpatient admissions with a surgical diagnosis-related group that occurred: (1) between January 1, 2004, and December 31, 2011, and (2) in a state that allowed for anesthesiologist assistant practice during this study period ($n = 2,602,686$; see Supplemental Digital Content, <http://links.lww.com/ALN/B729>, appendix table A.1, for a list of these states). We then attempted to match the inpatient claim to a claim submitted by an anesthesia provider by identifying claims submitted by an anesthesiologist, nurse anesthetist, or anesthesiologist assistant that (1) had an appropriate procedure code (Current Procedural Terminology codes 00100 to 01999), (2) had a date of service corresponding to the date of the primary surgical procedure reported on the inpatient claim, and (3) were submitted for the same patient as the patient listed on the inpatient claim. Details on how we performed this match can be found in the data appendix (Supplemental Digital Content, <http://links.lww.com/ALN/B729>). Ultimately, we were able to find a match for 1,064,591 admissions. Our inability to find a match for nearly half of the surgical admissions is because many diagnoses classified as “surgical” do not always require surgery. For example, one common surgical diagnosis, small bowel obstruction, is often managed without surgery.¹⁵ Moreover, not all surgeries receive care from an anesthesia provider.

From this set of admissions, we then applied several exclusion criteria. First, we excluded patients under 65 yr, to focus on the elderly Medicare population, and patients more than 89 yr, as many established quality measures impose this restriction ($n = 223,884$).¹⁶ Second, we excluded cases in which the surgical procedure code was missing ($n = 25,863$). Third, we excluded cases where patient race or sex was unknown ($n = 2,382$), as well as cases with missing costs ($n = 3$). Fourth, because the goal of our study was to compare outcomes when anesthesiologist assistants and nurse anesthetists are supervised by physician anesthesiologists, we excluded cases where neither a nurse anesthetist nor anesthesiologist assistant was involved in the patient’s care (*i.e.*, provision of care by a physician only; $n = 296,511$), as well as a small number of cases where both were involved in the patient’s care ($n = 84$). In addition, because nurse anesthetists in opt-out states may potentially practice independent of supervision by an anesthesiologist, we excluded any cases that occurred in an opt-out state in the years after the enactment of opt out ($n = 19,567$; see appendix table A.1 for a list of the opt-out states and the year of enactment, <http://links.lww.com/ALN/B729>). Finally, we excluded any surgery types for which we had fewer than 100 observations ($n = 31,204$), as well as cases from any hospital with fewer

than 100 observations ($n = 21,995$), resulting in a final sample of 443,098 cases representing 353 surgery types from 845 hospitals (see Supplemental Digital Content, <http://links.lww.com/ALN/B729>, appendix fig. A.1 for a flow chart providing further details on sample construction).

Outcomes

We evaluated three primary outcomes: inpatient mortality, inpatient length of stay, and inpatient spending. Death and length of stay were directly obtained from the claims data, with length of stay being defined as the number of days between the admission and discharge dates plus one (so that a patient admitted and discharged on the same day had a length of stay of one day). For inpatient spending, we summed the total amounts paid to the hospital for the given stay, as well as *all* spending on individual healthcare providers (*e.g.*, spending for the surgeon, the anesthesiologist, and any additional consultants) between the admission and discharge dates. Dollar amounts were adjusted to year 2016 dollars using the consumer price index.¹⁷

Exposure

Our main independent variable of interest was whether an anesthesiologist assistant or nurse anesthetist was part of the anesthesia care team. We identified this based on the anesthesia claim for the given procedure, which reports the specialty of the anesthesia provider (anesthesiologist, anesthesiologist assistant, or nurse anesthetist).

Additional Variables

We obtained a robust set of additional variables to adjust for potential confounding. First, race, age, and sex were directly obtained from the claims data. Second, using the diagnosis codes reported on the inpatient claim, we used previously described methods¹⁸ to measure the presence of the medical comorbidities (*e.g.*, diabetes, hypertension) that are used to determine the Elixhauser index, an index that is frequently used for risk adjustment.^{18,19} A list of the comorbidities we measured is provided in table 1. Finally, we used the primary International Classification of Diseases, Ninth Revision (ICD-9) procedure code reported on the inpatient claim to adjust for the primary surgery that was performed.

Statistical Analyses

To assess differences in characteristics between surgical cases with anesthesiologist assistant and nurse anesthetist involvement, we used a *t* test for continuous variables (*e.g.*, age) and a chi-square test for discrete variables (*e.g.*, comorbidities). However, because of our large sample, even trivially small differences may be statistically significant. Therefore, we used Hedges’s *g* to estimate the magnitude of the standardized difference between the two groups of cases. Specifically, Hedges’s *g* is the actual difference between the means of two groups divided by the population SD,²⁰ with values of less than 0.2 typically representing small differences between

Table 1. Sample Summary Statistics

| | NA (n = 421,230) | AA (n = 21,868) | P Value | Hedges's g |
|---|---------------------|--------------------|---------|------------|
| Age, yr | 75 (75–75) | 75 (75–75) | < 0.001 | 0.05 |
| Male, % | 44.0 (43.8–44.1) | 44.0 (43.3–44.6) | 0.97 | < 0.01 |
| White, % | 89.3 (89.2–89.4) | 86.1 (85.6–86.5) | < 0.001 | 0.10 |
| Congestive heart failure, % | 10.6 (10.5–10.7) | 11.0 (10.5–11.4) | 0.10 | 0.01 |
| Arrhythmia, % | 16.8 (16.7–16.9) | 16.4 (15.9–16.9) | 0.14 | 0.01 |
| Valvular disease, % | 5.4 (5.4–5.5) | 6.5 (6.2–6.8) | < 0.001 | 0.05 |
| Pulmonary circulation disorders, % | 1.5 (1.4–1.5) | 1.6 (1.5–1.8) | 0.06 | 0.01 |
| Peripheral vascular disease, % | 10.2 (10.1–10.3) | 11.7 (11.3–12.2) | < 0.001 | 0.05 |
| Hypertension, uncomplicated, % | 55.4 (55.2–55.6) | 55.6 (54.9–56.2) | 0.70 | < 0.01 |
| Hypertension, complicated, % | 8.3 (8.3–8.4) | 9.8 (9.4–10.2) | < 0.001 | 0.05 |
| Paralysis, % | 0.6 (0.6–0.6) | 0.7 (0.6–0.7) | 0.17 | 0.01 |
| Other neurologic disorders, % | 4.0 (4.0–4.1) | 3.8 (3.5–4.0) | 0.07 | 0.01 |
| Chronic pulmonary disease, % | 17.8 (17.7–18.0) | 17.6 (17.1–18.1) | 0.39 | 0.01 |
| Diabetes, uncomplicated, % | 20.0 (19.8–20.1) | 20.6 (20.0–21.1) | 0.023 | 0.02 |
| Diabetes, complicated, % | 3.7 (3.6–3.7) | 3.7 (3.3–3.9) | 0.88 | < 0.01 |
| Hypothyroidism, % | 11.9 (11.9–12.0) | 11.6 (11.1–12.0) | 0.12 | 0.01 |
| Renal failure, % | 7.8 (7.7–7.9) | 9.5 (9.1–9.9) | < 0.001 | 0.06 |
| Liver disease, % | 1.3 (1.3–1.3) | 1.3 (1.1–1.5) | 0.76 | < 0.01 |
| Peptic ulcer disease, without bleeding, % | 0.6 (0.5–0.6) | 0.5 (0.4–0.6) | 0.06 | 0.01 |
| AIDS/HIV, % | 0.0 | 0.0 | 0.18 | < 0.01 |
| Lymphoma, % | 0.8 (0.8–0.8) | 0.9 (0.7–1.0) | 0.23 | < 0.01 |
| Metastatic cancer, % | 3.7 (3.6–3.8) | 3.7 (3.4–3.9) | 0.76 | < 0.01 |
| Solid tumor, without metastasis, % | 11.9 (11.8–12.0) | 11.5 (11.1–11.9) | 0.07 | 0.01 |
| Rheumatoid arthritis/collagen vascular disease, % | 3.1 (3.0–3.1) | 3.2 (2.9–3.4) | 0.48 | < 0.01 |
| Coagulopathy, % | 2.8 (2.7–2.8) | 3.3 (3.0–3.5) | < 0.001 | 0.03 |
| Obesity, % | 6.0 (5.9–6.1) | 6.4 (6.1–6.7) | 0.014 | 0.02 |
| Weight loss, % | 3.4 (3.3–3.4) | 4.3 (4.1–4.6) | < 0.001 | 0.05 |
| Fluid and electrolyte disorders, % | 14.0 (13.9–14.1) | 15.3 (14.8–15.8) | < 0.001 | 0.04 |
| Blood loss anemia, % | 1.5 (1.4–1.5) | 1.6 (1.4–1.7) | 0.39 | 0.01 |
| Deficiency anemia, % | 1.2 (1.1–1.2) | 1.4 (1.2–1.5) | 0.011 | 0.02 |
| Alcohol abuse, % | 0.8 (0.8–0.9) | 0.9 (0.7–1.0) | 0.71 | < 0.01 |
| Drug abuse, % | 0.8 (0.7–0.8) | 0.6 (0.5–0.7) | 0.008 | 0.02 |
| Psychoses, % | 0.6 (0.6–0.6) | 0.5 (0.4–0.6) | 0.29 | 0.01 |
| Depression, % | 6.3 (6.2–6.4) | 5.8 (5.5–6.1) | 0.005 | 0.02 |

The table presents summary statistics for our sample, separately for patients receiving care from a nurse anesthetist (NA) or an anesthesiologist assistant (AA). *P* refers to the statistical significance of differences between the two groups, assessed by *t* test for age and by chi-square test for the remaining variables. Hedges's *g* refers to significance in terms of magnitude between the two groups, with values less than 0.2 representing small differences, values from 0.2 to 0.5 representing moderate differences, and values more than 0.5 representing large differences. 95% CIs are shown in parentheses.

two groups, values of 0.2 to 0.5 representing moderate differences, and values larger than 0.5 representing large differences.²¹

A simple comparison of outcomes between care teams with nurse anesthetists *versus* anesthesiologist assistants is likely to be confounded. To address this issue, our analysis adjusted for a robust set of potential confounders, such as patient characteristics (age, race, and sex), year of surgery, patient medical history (the set of comorbidities comprising the Elixhauser index; shown in table 1), and the ICD-9 procedure code for the given admission.

However, confounding from unobserved differences between the cases assigned to care teams with anesthesiologist assistants and nurse anesthetists could persist despite adjusting for the observable factors described above. As a first step toward minimizing confounding, our analysis also included fixed effects for each hospital to control for time invariant

observable and unobservable characteristics (*e.g.*, academic status, general case mix) specific to the hospital. In essence, by adding hospital fixed effects, our approach compares outcomes between care teams with anesthesiologist assistants and nurse anesthetists *within a given hospital* who are involved in similar types of surgeries for similar types of patients.

While comparing outcomes *within* a given hospital avoids confounding that could occur because of differences between hospitals that use care teams with anesthesiologist assistants and those that use nurse anesthetists, it does not address the issue of confounding between anesthesiologist assistant and nurse anesthetist cases *within* a given hospital (*e.g.*, the possibility of schedulers preferentially assigning lower-risk cases to care team with anesthesiologist assistants). Therefore, we employed an instrumental variable approach to further minimize confounding. The instrumental variable approach identifies the causal effect of a policy or treatment using an instrument, which is

any variable that (1) influences the independent variable of interest (in this case, whether the patient received care from an anesthesiologist assistant) but (2) is otherwise independent of the outcomes of interest (after controlling for the remaining independent variables). In effect, the instrument is used to quasirandomize patients to anesthesiologist assistants. For this analysis, we used variation in the daily number of anesthesiologist assistants available to do cases on the given day of surgery. There is likely to be day-to-day fluctuation in the number of anesthesiologist assistants available to do cases for several reasons. First, anesthesiologist assistants take vacation or call in sick. Second, “full-time” work for many anesthesiologist assistants involves less than 5 days per week. Finally, laws permitting anesthesiologist assistant practice changed during the study period (Supplemental Digital Content, <http://links.lww.com/ALN/B729>, appendix table A.1). For example, North Carolina passed legislation enabling anesthesiologist assistant practice in 2007, and Oklahoma followed in 2008. All these factors drive day-to-day fluctuations in the number of anesthesiologist assistants available to do work, which directly impacts the probability that an anesthesiologist assistant will be part of the care team for a given case. For example, if a patient arrives for surgery on a day when an anesthesiologist assistant has called in sick, an anesthesiologist assistant is less likely to be assigned to their care team. Moreover, none of these factors driving anesthesiologist assistant availability is likely to be associated with unobservable surgical and patient characteristics that might impact outcomes, particularly because decisions about anesthesiologist assistant scheduling (*e.g.*, the setting of vacation schedules) and laws permitting anesthesiologist assistant practice are typically made well in advance of the date of surgery. Although we do not directly observe the number of anesthesiologist assistants available to do cases on the given day, we do observe a closely related proxy: the daily percentage of a given hospital’s cases that involved anesthesiologist assistants. The daily percentage of cases involving anesthesiologist assistants should reflect the number of anesthesiologist assistants available to do cases, because if there are fewer anesthesiologist assistants available to do cases, the hospital must find other providers (*e.g.*, anesthesiologists or nurse anesthetists) to do the cases. A conceptually similar approach has been used to identify the effect of teacher quality on long-term outcomes.²²

We implemented our instrumental variable approach using a multivariable two-stage least-squares regression. The regression model included the adjustments for potential confounders (*e.g.*, patient sex, medical history, hospital fixed effects) previously described and used the daily percentage of a given hospital’s surgeries that were performed by care teams with anesthesiologist assistants as an instrument for whether the patient actually received care from a care team with an anesthesiologist assistant. Further details of our instrumental variable approach are provided in the technical appendix found in the Supplemental Digital Content (<http://links.lww.com/ALN/B729>). All statistical analyses were performed using STATA 14.0 (STATA Corporation,

USA). Because our study reports a negative finding, we did not adjust our significance thresholds for multiple comparisons, because in the light of a negative finding, *not* adjusting for multiple comparisons is conservative.

Our study design and this manuscript were prepared in accordance with the Strengthening the Reporting of Observational Studies in Epidemiology guidelines. The study protocol was approved by the Stanford Institutional Review Board (Stanford, California), who also issued a waiver of consent.

Sensitivity Analyses

We examined the robustness of the baseline statistical approach described above to alternative models of risk adjustment. Relative to our baseline approach, each of these alternative models achieves greater precision and statistical power but is more vulnerable to confounding from unobservable differences between patients that are treated by care teams with nurse anesthetists compared to patients that are treated by care teams with anesthesiologist assistants. First, we considered a model in which we used hospital fixed effects to model differences in unobservable factors across hospitals but in which we did not implement our instrumental variable approach. Rather, in this model, the independent variable of interest was simply whether an anesthesiologist assistant or nurse anesthetist was part of the care team. Second, we estimated a model that used a random-effects approach instead of a fixed-effects approach to model differences across hospitals. Finally, although our baseline approach used the ICD-9 procedure code to model surgical complexity, we considered two alternative ways of modeling surgical complexity. First, we estimated models in which we adjusted for the diagnosis-related group instead of the ICD-9 procedure code. Second, we estimated models in which we modeled surgical complexity using a random effects approach based on the ICD-9 procedure code.

Study Funding

This project received funding from the American Society of Anesthesiologists (ASA; Schaumburg, Illinois). The details of the funding mechanism are described in the Research Support section, and crucially, Drs. Sun and Baker retained final control over study design, manuscript formulation, and publication decisions. As part of the peer-review process for this manuscript, the original request for proposals from the ASA, the authors’ initial research proposal to the ASA, and the final submitted proposal and plan for analysis after comments from the ASA were provided to ANESTHESIOLOGY and the reviewers. Of note, the initial request for proposals called for the examination of additional outcomes related to patient safety indicators developed by the Agency for Healthcare Research and Quality (Rockville, Maryland).¹⁶ During the early stages of this study, the investigators realized that although the study was adequately powered to find differences in mortality, length of stay, and costs, many of these

patient safety indicators imposed additional exclusion criteria that would drastically reduce the sample size. As a result, we elected not to proceed further with analyses on these outcomes. In the interest of transparency, during the peer review process we performed these additional analyses, which can be found in the Supplemental Digital Content (<http://links.lww.com/ALN/B729>) as appendix table A.3. These results do not differ significantly from the results reported here.

Results

Our final sample consisted of 421,230 surgical cases in which the care team consisted of a physician anesthesiologist and a nurse anesthetist, and 21,868 cases in which the care team consisted of a physician anesthesiologist and an anesthesiologist assistant (table 1). Care teams with anesthesiologist assistants had younger patients (average age 75 yr, $P < 0.001$) who were less likely to be white (86.1 vs. 89.3%, $P < 0.001$). There was no significant sex difference between the two groups (44% male for both groups; $P = 0.97$). For 19 of the 31 comorbidities we examined, such as congestive heart failure and liver disease, there were no statistically significant differences. Of the remaining 12 comorbidities, 10 had a higher prevalence among cases with anesthesiologist assistant care teams (e.g., coagulopathy, peripheral vascular disease), whereas 2 (drug abuse and depression) were less prevalent among this group. However, while statistically significant, the magnitude of differences between the two groups was fairly small for all of the characteristics we examined (Hedges' g less than 0.15 for all characteristics).

The unadjusted mortality for cases with anesthesiologist assistant care teams and for cases with nurse anesthetist teams was 1.7% (95% CI, 1.5 to 1.9, for anesthesiologist

assistant teams and 95% CI, 1.6 to 1.7, for nurse anesthetist teams; $P = 0.87$ for the difference; fig. 1). After adjusting for observable and unobservable differences in case mix, patient characteristics, and hospital characteristics using the methods previously described, we found a slightly lower mortality for cases with anesthesiologist assistant care teams (1.6%; 95% CI, 1.4 to 1.8) compared to cases with nurse anesthetist care teams (1.7%; 95% CI, 1.7 to 1.7), although this difference was not statistically significant (0.08 percentage points; 95% CI, -0.3 to 0.1; $P = 0.47$). Although the unadjusted length of stay was higher for cases with anesthesiologist assistant care teams (6.7 vs. 6.4 days; $P = 0.06$), the risk-adjusted length of stay was approximately 6.4 days for both groups (95% CI, 6.4 to 6.4, for nurse anesthetists vs. 95% CI, 6.3 to 6.5, for anesthesiologist assistants; fig. 2), and the difference was not statistically significant (-0.009 days; 95% CI, -0.1 to 0.1; $P = 0.89$). Unadjusted medical spending was higher for care teams with an anesthesiologist assistant (\$23,630 vs. \$21,803; $P < 0.001$), but adjusted medical spending was lower (\$21,841 vs. \$21,897; fig. 3), and the implied \$56 reduction in spending was not statistically significant (95% CI, -334 to 223; $P = 0.70$). Our findings were robust to several alternative statistical models, such as the model where we used random effects to adjust for differences across hospitals (table 2).

Discussion

In the United States, anesthesia care is often provided in the setting of an anesthesia care team consisting of nonphysician providers (anesthesiologist assistants and nurse anesthetists) who work under the supervision of a physician anesthesiologist. Although nurse anesthetists can practice nationwide,

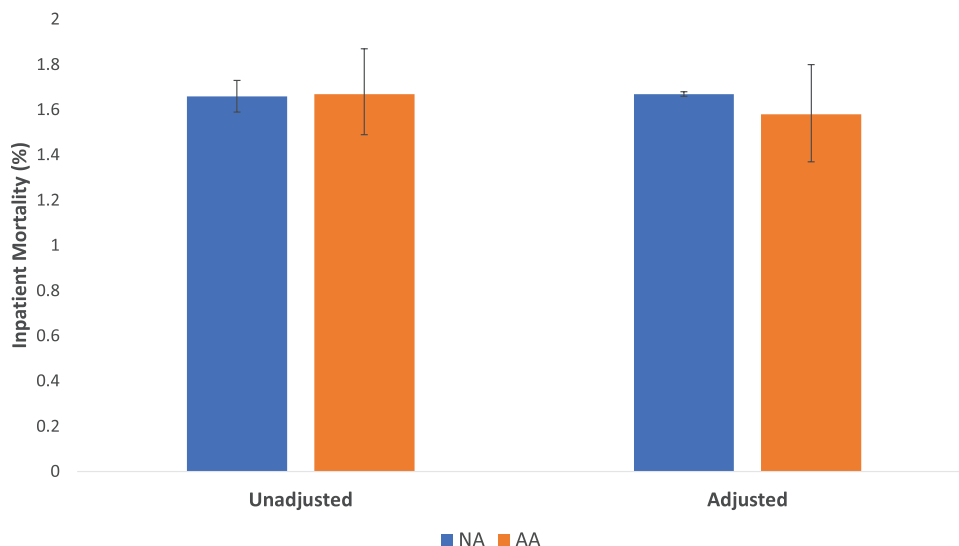


Fig. 1. Unadjusted and adjusted inpatient mortality, stratified by the composition of the anesthesia care team. The figure presents unadjusted and adjusted inpatient mortality rates separately for patients receiving care from anesthesia care team with nurse anesthetists (NA; blue) and care teams with anesthesiologist assistants (AA; orange). “Adjusted” refers to analyses that adjust for differences in surgery types, the patient characteristics listed in table 1, and hospital characteristics, using the approach described under Materials and Methods. The error bars represent 95% CIs and were calculated using standard errors that were clustered at the hospital level.

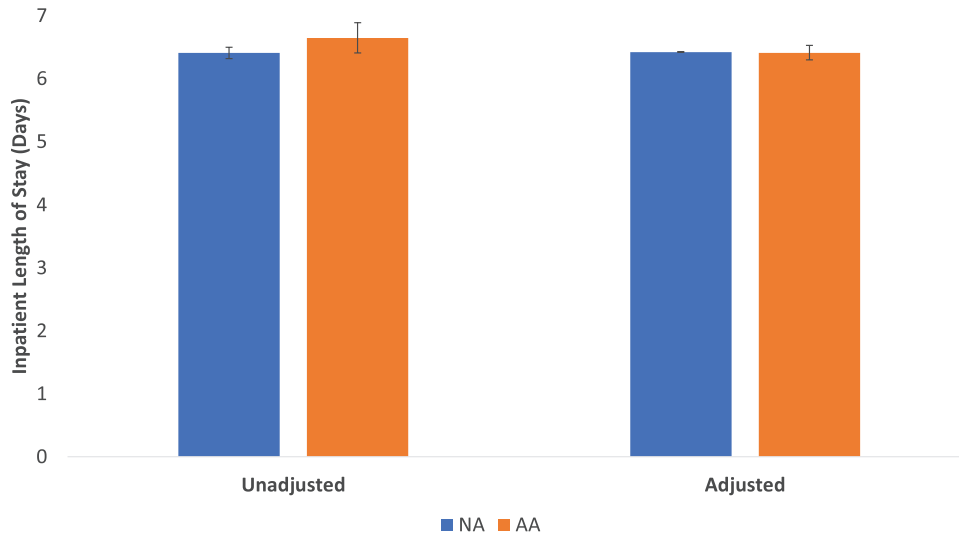


Fig. 2. Unadjusted and adjusted inpatient length of stay, stratified by composition of the anesthesia care team. The figure presents unadjusted and adjusted inpatient length of stay, separately for patients receiving care from anesthesia care team with nurse anesthetists (NA; *blue*) and care teams with anesthesiologist assistants (AA; *orange*). “Adjusted” refers to analyses that adjust for differences in surgery types, the patient characteristics listed in table 1, and hospital characteristics, using the approach described under Materials and Methods. The *error bars* represent 95% CIs and were calculated using standard errors that were clustered at the hospital level.

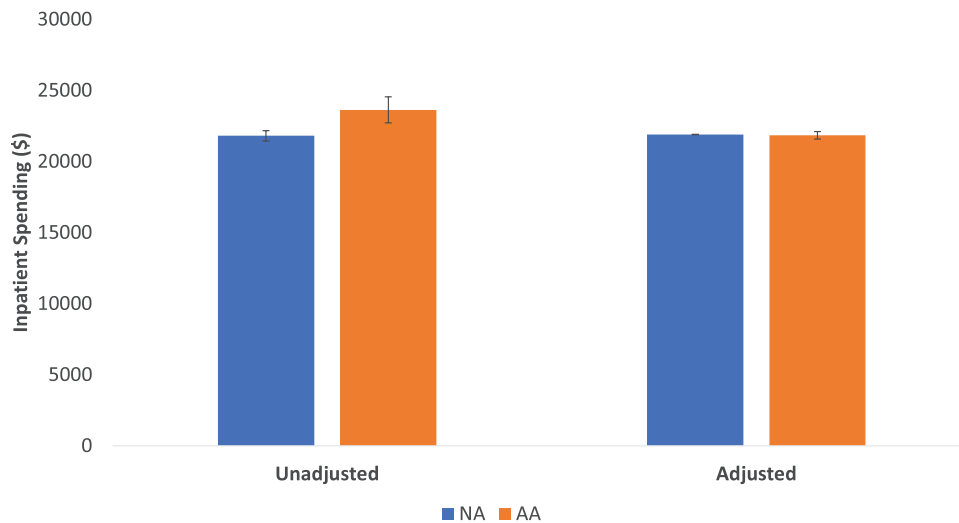


Fig. 3. Unadjusted and adjusted inpatient spending, stratified by the composition of the anesthesia care team. The figure presents unadjusted and adjusted inpatient spending, separately for patients receiving care from anesthesia care team with nurse anesthetists (NA; *blue*) and care teams with anesthesiologist assistants (AA; *orange*). “Adjusted” refers to analyses that adjust for differences in surgery types, the patient characteristics listed in table 1, and hospital characteristics, using the approach described under Materials and Methods. The *error bars* represent 95% CIs and were calculated using standard errors that were clustered at the hospital level.

anesthesiologist assistants can only practice in 16 states and the District of Columbia, and efforts to expand the areas where anesthesiologist assistants can practice have been challenged by concerns over poorer patient outcomes. However, whether these concerns have an empirical basis has not been studied. To inform policymaking regarding the scope of anesthesiologist assistant practice, we compared outcomes between care teams with nurse anesthetists to care teams with anesthesiologist assistants for elderly patients undergoing

inpatient surgery. Our study found no statistically significant difference in outcomes of mortality, length of stay, and spending between these two types of care teams. In addition, the narrow CIs around our estimated results suggest that our null findings are due to a true lack of association, as opposed to imprecision in our estimates.

The key implication of our findings is that the specific composition of the anesthesia care team—in other words, whether the physician anesthesiologist supervises a nurse

Table 2. Association between Use of Anesthesiologist Assistants and Perioperative Outcomes, Alternative Model Specifications

| Model | Outcome | | | Notes |
|----------------------------------|--|--|--|--|
| | Death, % | Length of Stay, days | Inpatient Spending, \$ | |
| Baseline analysis | -0.08 (95% CI, -0.3 to 0.1) P = 0.47 | -0.009 (95% CI, -0.1 to 0.1) P = 0.89 | -56 (95% CI, -334 to 223) P = 0.70 | Baseline model |
| Fixed effects only | -0.01 (95% CI, -0.2 to 0.2) P = 0.91 | -0.01 (95% CI, -0.1 to 0.08) P = 0.78 | -68 (95% CI, -292 to 156) P = 0.55 | This model omitted the instrumental variables approach used for the baseline analyses but retained the hospital fixed effects to adjust for differences across hospitals |
| Random-effects model (hospital) | -0.2 (95% CI, -0.3 to 0.02) P = 0.09 | -0.02 (95% CI, -0.1 to 0.07) P = 0.63 | -41 (95% CI, -262 to 180) P = 0.72 | This model adjusted for differences across hospital using a random-effects approach instead of a fixed-effects approach |
| Random-effects model (procedure) | 0.03 (95% CI, -0.2 to 0.2) P = 0.76 | -0.002 (95% CI, -0.1 to 0.09) P = 0.97 | 48 (95% CI, -182 to 280) P = 0.68 | This model adjusted for surgical complexity using a random-effects approach instead of a fixed-effects approach |
| DRG adjustment | -0.04 (95% CI, -0.3 to 0.2) P = 0.74 | 0.05 (95% CI, -0.07 to 0.2) P = 0.44 | 237 (95% CI, -62 to 535) P = 0.12 | This model adjusted for surgical complexity using the DRG instead of the surgical procedure code |

The table presents the results of sensitivity analyses in which we considered the robustness of our results to alternative statistical model. Baseline Analysis refers to the baseline model used to produce the main results discussed in the text. The alternative statistical models were a fixed-effects only model, a model with random effects for hospitals, a model with random effects for procedure, and a model that used diagnosis-related groups (DRG) to adjust for surgical complexity. A brief description of each model is provided under Notes. The table presents the estimated association between anesthesiologist assistant care and the given outcome. For death, the table shows the estimated percentage point change in inpatient mortality. The 95% CI values shown in parentheses were calculated using robust standard errors.

anesthetist or an anesthesiologist assistant—is not likely to be associated with differences in patient outcomes. In some respects, this is not a surprising finding, because particularly at academic centers, physicians successfully supervise trainees and nonphysician providers with a wide variety of backgrounds and experience. As a particularly striking example, consider that at academic medical centers, the most experienced trainees complete training and leave on July 1, to be replaced by a new set of unexperienced medical trainees. However, a large portion of the literature suggests that this turnover (the “July effect”) is not associated with any difference in patient outcomes,²³ suggesting that potentially problematic effects of rather drastic differences in experience among medical trainees can be mitigated with appropriate systems, teams, and physician supervision. In this context, we emphasize that our results do not address whether, in isolation, anesthesiologist assistants or nurse anesthetists are systemically “better” for patients. Instead, our results suggest that the team structures and physician supervision in place in this study context are able to mitigate any systemic differences between the two groups, if they exist at all.

Our study should be viewed in light of its limitations. First, as with all retrospective analyses, we cannot exclude the possibility of residual confounding. In particular, our data did not allow us to adjust for provider experience or differences in supervision ratios between anesthesiologist assistants and nurse anesthetists or differences in case assignment based on unobservable measures of patient complexity. However, we made extensive efforts to minimize the possibility of confounding. Because we compared outcomes *within*

a given hospital, our results would only be confounded to the extent that *within* a given hospital, patients taken care of by anesthesiologist assistant care teams are at lower risk than those taken care of by nurse anesthetist care teams. Moreover, we found no significant differences between patients who received care from an anesthesiologist assistant care team compared to those who received care from a nurse anesthetist care team for most of the characteristics we considered (*e.g.*, patient comorbidities; see table 1), and where there were differences, they suggested that anesthesiologist assistant care teams tended to take care of *higher-risk* patients. Finally, our analysis adjusted for an extensive set of potential confounders and utilized a quasirandomization approach to further minimize confounding.

Second, our analysis was limited to elderly Medicare patients undergoing inpatient surgery, a high-risk population. Third, our study covered the time period between 2004 and 2011. Although the vast majority of the 17 jurisdictions (16 states and the District of Columbia) that enabled anesthesiologist assistant practice did so either before or during the study period, one state (Indiana) enabled anesthesiologist assistant practice in 2014, outside of our study period. Fourth, because our study could not measure supervision ratios, we cannot draw any conclusions about the optimal supervision ratio for either anesthesiologist assistants or nurse anesthetists. Fifth, our study was not designed to address the question of whether there are benefits from independent anesthesiologist assistant practice. Sixth, our study did not measure other potential quality measures (*e.g.*, mortality 30 days postdischarge, incidence of intensive care unit

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admission). Seventh, it should be noted that although all the nurse anesthetists and anesthesiologist assistants in our analysis were supervised by a physician, nurse anesthetists can (in rare cases) be supervised by the surgeon or proceduralist as opposed to a physician anesthesiologist, and we were unable to exclude cases where this could have occurred. Finally, with regards to medical spending, our study did not address whether the expanded use of anesthesiologist assistants could change the structure of the anesthesia workforce and alter the nature of competition between anesthesia providers. How these potential changes would affect the negotiated prices paid by private insurers to anesthesia providers is a subject for future study.

In conclusion, among elderly patients undergoing inpatient surgery, our study found no significant differences in outcomes between care teams with anesthesiologist assistants compared to care teams with nurse anesthetists. Further work should examine whether these results extend to other patient populations and types of surgery, including, for instance, privately insured patients and outpatient surgeries. Moreover, because improving access to care is a frequently cited rationale for expanding the use of midlevel anesthesia providers,^{24–26} further research should examine whether the introduction of anesthesiologist assistants has improved access to care. Finally, from a regulatory and antitrust standpoint, understanding the extent to which the introduction of anesthesiologist assistants has impacted competition among groups of anesthesia providers is a fruitful area for further research.

Research Support

Supported by funding from the American Society of Anesthesiologists (ASA, Schaumburg, Illinois; to Dr. Sun, Dr. Baker, and Ms. Moshfegh). The ASA issued a request for proposals to three organizations, including Stanford, for a study to compare outcomes between anesthesia care teams with anesthesiologist assistants and anesthesia care teams with nurse anesthetists. Drs. Sun and Baker elected to respond to the request and prepared a bid including an outline of the study methodology, which they developed without input from the ASA. In all, the ASA received three bids. The decision on which bid to accept was made by the Executive Committee of the ASA, with Dr. Miller's input. Dr. Miller was employed by the ASA.

Competing Interests

Dr. Miller is employed by the American Society of Anesthesiologists. Although all authors participated in the study design, data analysis, manuscript preparation, and publication decisions, the funding arrangement provided that the Stanford investigators—specifically Drs. Sun and Baker—had the final say over all elements of the study.

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be accessed for personal use at no charge through the Journal Web site, www.anesthesiology.org.

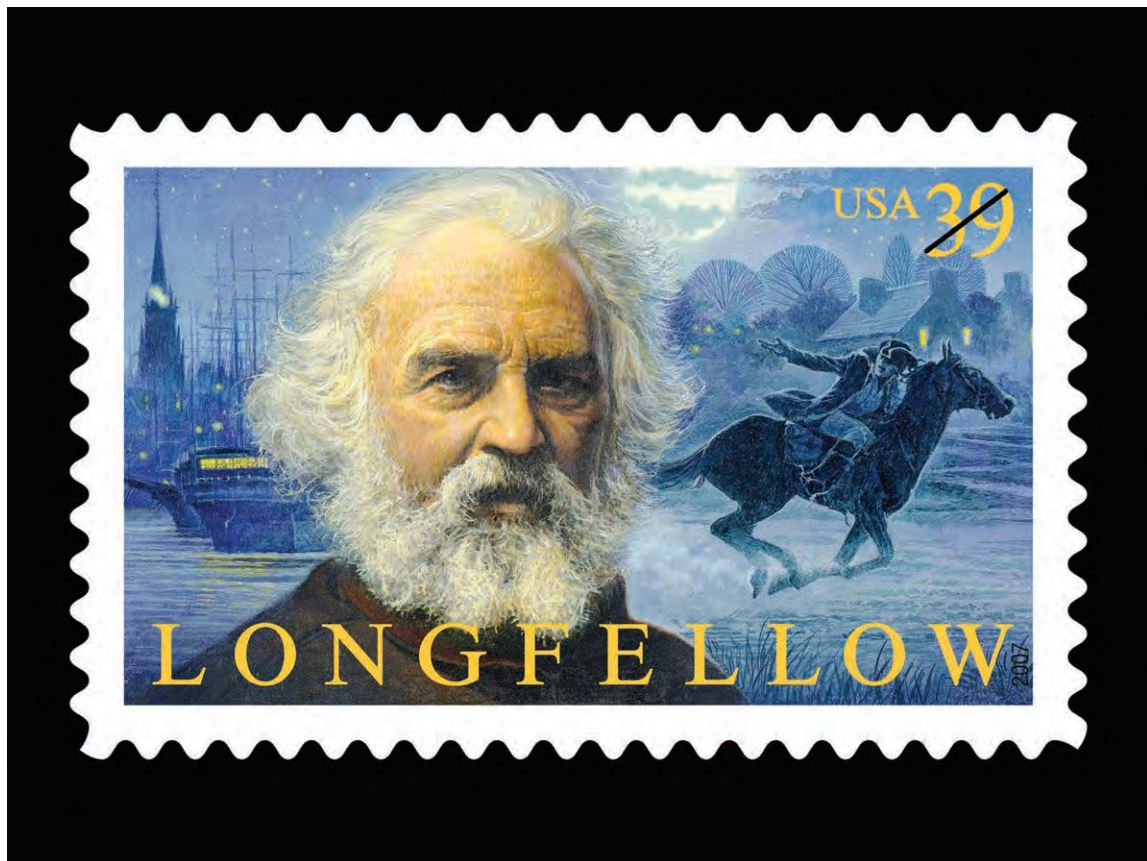
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ANESTHESIOLOGY REFLECTIONS FROM THE WOOD LIBRARY-MUSEUM

How Two Longfellows Revered Ether



Issued in 2007 with images of Boston's Old North Church and the midnight rider Paul Revere, this 39-cent U.S. postal stamp commemorated the 200th anniversary of the birth of American poet Henry Wadsworth Longfellow (1807 to 1882). Because Georgia's Crawford Long, M.D., failed to publish his use of obstetric ether more than 2 yr earlier, Longfellow's wife Fanny became the first American *recorded* to have received ether for obstetric anesthesia. (Note: Fanny's etherization by Dr. Nathan Cooley Keep occurred more than 3 months after Professor James Y. Simpson's use in Scotland of obstetric ether.) Severely burned in 1861 after her dress had caught fire, Mrs. Longfellow was given ether for analgesia before she succumbed to her injuries. While using a rug and his own body to extinguish the flames, Henry had been burned severely enough to miss Fanny's funeral and to warrant growing a beard to hide his scars. As a widower, Longfellow assuaged both his burning pain and his unrelenting grief with ether. (Copyright © the American Society of Anesthesiologists' Wood Library-Museum of Anesthesiology.)

George S. Bause, M.D., M.P.H., Honorary Curator and Laureate of the History of Anesthesia, Wood Library-Museum of Anesthesiology, Schaumburg, Illinois, and Clinical Associate Professor, Case Western Reserve University, Cleveland, Ohio. UJYC@aol.com.

Attachment 3: Anesthesia Rural Pass-Through Program

Improve Rural Health Care Access

Update the Anesthesia Rural Pass-Through Program

Many states face ongoing challenges in assuring access to medical care services for their citizens living in rural areas. Insufficient Medicare payments and low patient volume have made it particularly difficult for many rural facilities to attract and retain qualified health care providers. In response to these challenges, Congress has enacted a variety of incentive programs to encourage providers to practice in rural areas.

One such program is the anesthesia rural “pass-through” program – a program created as an incentive for anesthesia providers to practice in small rural hospitals. Under the “pass-through” program, eligible hospitals may use reasonable-costs based Part A payments in lieu of the conventional Part B payments as a rural practice inducement for non-physician anesthesia providers such as anesthesiologist assistants (a type of physician assistant) and nurse anesthetists to practice in small, low volume rural hospitals. Under the Centers for Medicare and Medicaid Services (CMS) current interpretation of the current “pass-through” program, eligible small rural hospitals are not permitted to use the “pass-through” funds to hire physician anesthesiologists. Changes are necessary to expand rural access to the services of physician anesthesiologists.

Congressman Emanuel Cleaver (D-MO-05) and Congressman Jason Smith (R-MO-08) introduced the bipartisan Medicare Access to Rural Anesthesiology Act which would reform the program and allow rural hospitals to use already available “pass-through” funds to employ or contract with all types of anesthesia providers – physician anesthesiologists, as well as nurse anesthetists and anesthesiologist assistants. ASA strongly supports this legislation.

Key Points:

- Low Medicare Part B anesthesia payments and low patient volume in rural areas make it difficult for rural hospitals to retain anesthesia providers.
- Current law allows some rural hospitals to use reasonable-cost Medicare Part A “pass-through” payments to employ or contract with non-physician anesthesia providers. According to CMS, the “pass-through” arrangement cannot be used for physician anesthesiologists.
- The American Society of Anesthesiologists (ASA), through formal comment, has requested that CMS permit rural hospitals to use the rural pass-through arrangement for physician anesthesiologists, as well as the other providers. CMS responded that it cannot permit hospitals to use the pass-through arrangement for physician services.
- Extending the pass-through arrangement to physician anesthesiologists allows eligible rural hospitals to utilize the rural incentive payment for all types of anesthesia providers.
- In rural hospitals, there is an acknowledged shortfall of physician health care providers. By extending the pass-through, rural hospitals could more readily recruit and retain physicians to provide anesthesia services in rural areas.

REQUEST:

Please cosponsor and pass H.R. 2666, the Medicare Access to Rural Anesthesiology Act, legislation that would extend rural hospitals’ use of Medicare’s pass-through arrangement to physician anesthesiologists.

Attachment 4: Educational Program Curricula and Handbooks

2019-
2020

MCW Master of Science in Anesthesia

Program Handbook

Last revision 6-1-19



INTRODUCTION

This MSA Program Handbook provides information regarding policies and procedures applicable to students in the Master of Science in Anesthesia (MSA) Program, at the Medical College of Wisconsin's Milwaukee campus. Changes to existing policies or new policies may be adopted and implemented by the program. In such cases, students will receive notification of the policy change. The broader MCW Student Handbook policies also apply to the MSA Program and its students.

Program Goal

“To prepare competent entry-level Anesthesiologist Assistants in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains.”

MCW Medical School Mission

To be a national leader in the education and development of the next generation of physicians and scientists; to discover and translate new knowledge in the biomedical sciences; to provide cutting-edge, interdisciplinary and compassionate clinical care of the highest quality; to improve the health of the communities we serve.

MCW Master of Science in Anesthesia Program Mission

The MCW Master of Science in Anesthesia Program provides high-quality anesthesia education through student-centered classroom and clinical education/mentorship. The program develops graduates who embrace the Anesthesia Care Team (ACT) model and deliver exceptional value-based care.

MCW Master of Science in Anesthesia Program Vision

Transform health care education through courageous innovation and a dedication to our community.

Anesthesiologist Assistant Oath

I will strive to reduce the suffering of my patients at all times, and never will I use my skills to knowingly cause injury or for any wrongdoing.

I will treat each patient with equal energy, and respect his or her diversity, while safeguarding their privacy and honoring their right of autonomy.

I will work to be an exemplary ambassador of the Anesthesiologist Assistant profession, and will always work to strengthen its place in the healthcare team.

Accreditation

The Master of Science of Anesthesia Program has been awarded accreditation by the Commission on Accreditation of Allied Health Education Programs (CAAHEP).

Commission on Accreditation of Allied Health Education Programs
25400 US Highway 19 North
Suite 158
Clearwater, FL 33763
727 210 2350
www.caahep.org

MSA Student Government

Role and Responsibilities

- Facilitates constructive, effective and consistent communication among the student body, faculty and administration.
- Maintains effective communication among students.
- Ensures that student concerns remain visible to faculty and administration, and that students are represented in decision-making processes.
- Focuses diffuse student ideas, concerns, and issues into coherent, well-considered plans of action.
- Facilitates student development as adults and medical professionals.
- Teaches students about process and consensus-building as constructive means of accomplishing goals.
- Empowers students to positively influence their academic environment.
- Works to improve student quality of life by implementing useful programs and support services.
- Represent the student body of the Medical College of Wisconsin in good faith by soliciting and sharing information from a diverse and representative cross-section of the student body.
- Fairly administer and distribute all funds currently designated as Student Activity Fees.
- Maintain a constructive and professional relationship with students, faculty and administration at the Medical College of Wisconsin.
- Work to improve the quality of student experiences at the Medical College of Wisconsin.
- Create its own constitution, bylaws, subcommittees and agenda consistent with the overall mission of the Medical College of Wisconsin.

Committee shall meet throughout the academic year to discuss various program activities. The committee will be responsible for presenting pertinent information to the Program Director and Program Administration, and to the student body through class meetings.

Affiliated Members and Organizations

Two or more representatives of each MSA class will be elected to serve as representatives to the American Academy of Anesthesiologist Assistants. These representatives will facilitate communication between the AAAA, the program, and the student body.

MSA Program Committees

Advisory Committee

- Evaluate the program, make recommendations as to policy changes and program improvement
- Ensure accreditation compliance
- Review educational goals and objectives, course content and sequencing, and instructional methods
- Plan for adequate learning resources necessary to achieve instructional goals
- Establish and review student clinical performance criteria

Admissions Committee

- Interview, review, select applicants for Program matriculation
- Promote the mission and vision of MCW through interview processes
- Reports the proceedings of the Dean and Faculty Council on a routine basis

Curriculum Committee

- Formulate educational goals consistent with Program requirements
- Implement procedures to evaluate Program educational goals
- Use evaluation results to improve educational programs

Academic Standing Committee

- Operate under the guidance and direction of MCW's Academic Standing Committee
- Follow MCW Academic Standing Committee procedures
- Provide input to MCW's Academic Standing Committee for all decisions with regard to 1) the promotion, suspension and discharge of individual students for academic reasons and 2) the determination of whether a student has satisfied the requirements for the MSA degree program

MSA Curriculum

Requirements for the MSA Degree

The following are the requirements for the MSA degree from the Medical College of Wisconsin:

- Successfully complete all required coursework and clinical rotations.
- Successfully pass a comprehensive anesthesia simulation exam prior to advancing to the clinical phase of the program (Semester 4 and 5)
- Demonstrate competence in patient care and anesthetic management as defined by the Master of Science in Anesthesia Global Competencies (*adopted from the NCCAA*).
- Demonstrate integrity in personal conduct, respect for the rights of others and evidence of ethical conduct and mature judgment throughout the course of study.
- Meet the “Physical and Technical Standards for the Anesthesiologist Assistant Student”
- Attend the commencement exercises.

Course List

| Semester 1 | |
|--------------|--|
| ANE 501 | Foundations in Clinical Science |
| ANE 502 | Foundations of Clinical Practice |
| ANE 503 | Foundations in Anesthesia |
| ANE 511 | Physics and Delivery Systems for Anesthesia |
| ANE 521 | Patient Assessment I: Approach to the Health Patient |
| ANE 531 | Planning and Preparation I: Approach to the Healthy Patient |
| ANE 541 | Implementation and Management I: General Anesthesia and Sedation |
| ANE 551 | Anesthesia Simulation I: The General Anesthetic and MAC |
| ANE 561 | Professionalism I: Introduction to Professional Behavior, Medical Ethics, and Value-based Care |
| Semester 2 | |
| ANE 522 | Patient Assessment II: Approach to the Patient with Comorbidities |
| ANE 532 | Planning and Preparation II: Approach to the Patient with Comorbidities |
| ANE 542 | Implementation and Management II: Care for the Complex Patient undergoing Surgical Care |
| ANE 552 | Anesthesia Simulation II: Managing the Patient with Comorbidities |
| ANE 562 | Professionalism II: Organizations and Evidence-Based Practice |
| ANE 571 | Clinical Anesthesia I |
| Semester 3 | |
| ANE 581 | Subspecialty Practice: Introduction to Patient Assessment and Planning for Special Populations |
| ANE 553 | Anesthesia Simulation III: Advanced Techniques and Crisis Management |
| ANE 563 | Professionalism III: Practice management, Professional Issues and Compensation |
| ANE 572 | Clinical Anesthesia II |
| Semester 4-5 | |

| | |
|---------|---|
| ANE 671 | Clinical Anesthesia III |
| ANE 672 | Clinical Anesthesia IV |
| ANE 681 | Seminar in Reflective Practice |
| ANE 682 | Seminar in Reflective Practice |
| ANE 661 | Professionalism IV: Quality Improvement in Anesthesia |

MSA Technical Standards for Admission, Promotion, and Graduation

Technical standards, distinguished from academic standards, consist of the minimum physical, cognitive, and emotional attributes required to provide reasonable assurance that a student can complete the entire course of study and participate fully in all aspects of their training.

Refer to Physical and Technical Standards for the Anesthesiologist Assistant Student.

MSA Global Competencies and Terminal Objectives

At the end of their curriculum, students must be able to demonstrate the following competencies (adapted from the NCCAA):

Competency Category 1: Foundational Knowledge

- Foundational Cardiovascular Physiology for Anesthesia Practice
- Foundational Pulmonary Physiology for Anesthesia Practice
- Foundational Renal Physiology for Anesthesia Practice
- Foundational Nervous System Physiology for Anesthesia Practice
- General Physiology and Pharmacology for Anesthesia Practice
- Foundational Physics for Anesthesia Practice
- Foundational Knowledge of Equipment and Technology for the Anesthetic Practice

Competency Category 2: Team-based Direct Patient Care

Subcategory A: Patient Assessment

Obtain and review current and previous medical/anesthetic records to determine problems and solutions as well as potential risks so that known complications that may result in patient morbidity or mortality are avoided.

Interview patients and/or families, gather pertinent patient history, and confer with OR team and other healthcare colleagues to formulate the care plan.

Identify and assess implications of patient's current medications and other treatments or therapies (for example, supplements, CPAP/BiPap) to provide optimal patient care.

Perform an anesthesia focused physical examination in order to identify any potential concerns that may require additional work up, consultation, or evaluation.

Obtain and analyze pre-operative test results for the purpose of identifying anesthetic considerations that require treatment, intervention or additional consultation.

Determine patient's NPO status with respect to the ASA NPO guidelines/institutional NPO guidelines in order to foster patient safety.

Subcategory B: Planning and Preparation

Contribute to the development of the anesthetic care plan, in collaboration with the ACT, by

incorporating results from the patient assessment, which addresses the specific requirements of the procedure.

Review and discuss anesthetic choices, including the explanation of risks and benefits to obtain/verify informed patient consent.

Ensure the availability of personnel and resources (for example, intraoperative monitoring, equipment, blood products, and medications) required for patient management.

Establish communication with the perioperative team to discuss pertinent information (for example, patient care hand-off, lab results, surgical plans, anesthetic concerns) to maximize patient safety.

Verify completion of required documentation related to patient assessment, planning, and preparation of patient care.

Plan for immediate post-operative needs for the patient (for example, post-op mechanical ventilation, direct admission to an ICU) to ensure a smooth and safe transfer of patient care between providers

Subcategory C: Implementation and Management

Perform anesthetic related procedures and utilize evidence-based best practice to optimize patient, anesthetic and surgical care.

Ensure optimal patient positioning with respect to the surgical procedure to prevent injury.

Anticipate and manage common and critical events with consideration of co-existing diseases, to optimize patient outcomes and prevent patient injury.

Communicate concerns to the attending anesthesiologist and to members of the perioperative team, to ensure continuous safe and effective patient care.

Implement and interpret the results of, continuous physiologic monitoring, to evaluate and respond to changes in the patient's physiologic parameters through use of medical equipment and pharmaceuticals.

Perform proper transfer of care with effective hand-off to other healthcare providers, by exchanging all relevant information, in order to ensure safe post-anesthesia care.

Competency Category 3 : Clinical Practice Management and Development

Advocate for the practices and principles of the anesthesiologist-directed Anesthesia Care Team to deliver safe and quality anesthetic care.

Participate in quality improvement/assurance activities to enhance safety and effectiveness of patient care.

Integrate evidence-based practice from validated contemporary research and clinical case reviews.

Promote adherence to regulations, standards of care, and evidence-based practice recommendations.

Practice cost effective healthcare that optimizes resource allocation and quality of care.

Practice truthfulness and transparency as they relate to patients, families, healthcare professionals and the public.

Competency Category 4 : Professionalism

Establish a true and transparent relationship of care with patients and families by describing the role of the AAs on the healthcare team.

Demonstrate sensitivity, empathy, accountability, and respect to diverse patient populations.

Accept and adhere to professional codes of ethics.

Participate in professional development activities (for example, continuing medical education, conferences and workshops).
Maintain active membership in AAAA and other anesthesia-related professional organizations. Apply for NCCAA certification.
Contribute to the anesthesia body of knowledge (for example, participate in peer review process, research, publish scholarly literature, deliver presentations) to advance the delivery of quality care and improve patient safety.
Provide education, mentoring and support to AA students and other healthcare providers.
Identify prospective AA leaders and mentor toward teaching and administrative roles in order to foster the development and promotion of the AA profession.
Advocate for the role and contribution of AAs to the public, healthcare providers, health systems, and policy makers.
Maintain personal wellness (for example, stress management, work/life balance) in order to provide the safest possible patient care).

Demonstration of these competencies is a requirement for Master of Science in Anesthesia degree completion and graduation. If a student cannot successfully demonstrate these competencies, the student's program may be extended or otherwise altered to ensure successful performance as an anesthesiologist assistant. Changes to the course of study are at the discretion of Program Director and the Academic Standing Committee and may include course repeat, remedial course requirements, and additional clinical rotation requirements.

MSA Academic Standards of Progress and Grading

Introduction

This policy has been developed to ensure that students pursuing the MSA degree maintain an acceptable rate of academic progress toward the completion of that degree and meet the expected academic standards of the Medical College of Wisconsin. This policy will also ensure that the student financial aid program meets or exceeds requirements set forth by federal regulations governing academic standards for financial aid eligibility.

Scope

This policy applies to all students enrolled in the MSA program.

Grading System

The Medical College of Wisconsin MSA Program employs a Satisfactory (S) and Unsatisfactory (U) grading scale. A grade of Incomplete can be used only when a student has not been able to complete course requirements for some acute and unexpected circumstances beyond the student's control. A course grades of S corresponds to a grade of B or better. S/U courses meet program requirements for full-time status and degree requirements. Course completion requirements are defined in the course syllabus.

Fully Satisfactory Performance

Fully satisfactory performance means that the student earns a minimum grade of S and satisfactory achievement of all course competencies.

Course Competency Assessment

The safe practice of anesthesia requires satisfactory achievement in knowledge, skill and professional

behavior. To ensure graduates of the MSA Program achieve competency as an entry-level anesthesiologist assistants, successful completion of each course includes mastery of defined course competencies. The minimum achievement requirements for each competency are determined by the course instructor and defined in the course syllabus. If a student fails to satisfactorily complete any course competency, a retest opportunity will be offered. Any competency not completed by the end of the semester, will result in a grade of Incomplete (I). Retests will be similar in format and content to the original course material presented, and scheduled at the discretion of the course instructor.

Full-time Student Status

All students in the MSA program must enroll officially through the Registrar's Office. Enrollment must be for full-time study; no part-time or lightened course load is allowed in the program.

Transfer and Experiential Credit

The Master of Science in Anesthesia program presents a rigorous and fast-paced curriculum. Therefore, credit for previous coursework or experiential learning will not be offered.

Academic year

Academic year refers to a period of time during which most students complete a standard course of study, such as the freshman year, sophomore year, etc. The duration and term of an academic year varies with the year of study. For MSA students, the first academic year is normally divided into two semesters: August through December, and January through June. Subsequent years are divided into two semesters: July through December, and January through June.

Professional Degree Requirements and Time Limits

To complete the MSA program and be considered for conferral of degree, students must complete all coursework listed in the curriculum and meet the prescribed grading criteria.

Students are expected to complete the requirements for their degree within the following time limits: Standard 28 months, maximum 40 months.

Course Progression

The Master of Science in Anesthesia curriculum has been thoughtfully designed to integrate learning across the curriculum and throughout the student's progression through the program. Therefore, all coursework must be taken in the described sequence. Students will not be permitted to register for subsequent coursework until all courses from the previous terms are completed with at least a minimum passing grade of S. Students may not register for less than the full course load in any semester as described in course list.

Course Retake, Repeat, and Remediation

In the event a student does not earn at least a minimum grade of "S" on initial course offering, the student will be offered a comprehensive remediation exam. Upon passing the remediation exam, the student's transcripts will reflect a grade of "S (R)" and will be noted as a "S Remediated". Upon failing a remediation exam, the original course grade of "U" will remain, and the course must be repeated, if eligible (see Academic Dismissal). A student may only remediate up to two courses while enrolled in the MSA Program.

A student who fails to complete all coursework in the first year (Semester 1 and 2), either through initial offering or a remediation assignment, will be required to repeat the entire first year coursework. All

didactic and clinical coursework in Semester 1, 2, and 3 must be completed prior to advancing to the clinical phase of the program (semester 4 and 5). Failure to complete all coursework prior to the clinical phase will require extension of the program. A student who fails to complete all coursework in semester 3, either through initial offering or remediation, will be required to complete a comprehensive remedial course prior to progressing to the clinical phase of training. There are no remedial courses offered for clinical phase coursework.

All clinical courses must be completed prior to graduation. Each clinical course is comprised of multiple clinical rotations of varying length (two weeks to four months). A student who fails to successfully complete a clinical rotation as defined by the course syllabus, regardless of length, will be required to complete an additional one-month clinical rotation, resulting in extension of the program. The additional rotation will occur immediately following the unsuccessful rotation and may occur at any previously scheduled location or any alternate location at the discretion of the program director. If all clinical rotations, including any additional clinical rotation, are not completed by the end of the term, the student will receive a course grade of "I" until all requirements are complete. Upon successful completion of any clinical course where an additional rotation was assigned, the course grade will be "S (R)" and will be noted as a "S Remediated". If a student fails to successfully complete two assigned clinical rotations or any additional rotations, the student will receive a course grade of "U" and may be placed on academic probation or considered for dismissal. Requirements for successful completion of a clinical course are described in the course syllabus.

Rules for Exam Review and Appeals

Dependent on the individual course director and specific examination, students may have opportunities to review exam performance and submit subsequent appeals. Course syllabi will outline the process for each course.

Academic Probation

Students pursuing the MSA degree at the Medical College of Wisconsin are expected to demonstrate an acceptable rate of academic progress toward earning their degree by maintaining enrollment as a full-time student and by achieving an expected level of academic performance. Students who do not maintain adequate academic progress may be placed on academic probation. Students may be placed on academic probation due to the following circumstances:

- any grade of "S Remediated" or lower
- other patterns of academic or professional difficulty deemed to be of significant concern by the program

Once placed on academic probation, a student will typically remain on probation for the remainder of the program. However, in some instances students may qualify to be removed from academic probation if academic achievement is demonstrated. Students will be notified in writing when placed on or removed from probationary status. Academic probation will not be recorded on the student's transcript but may be reported on the student's formal academic record.

Academic Dismissal

Students who are on academic probation must maintain acceptable academic progress in all subsequent coursework. If a student who is currently on academic probation receives any grade of “S Remediated” or lower in any course, the student will be referred to the Academic Standing and Professionalism Committee of the Medical College of Wisconsin for dismissal.

Any student referred to MCW’s Academic Standing and Professionalism Committee is subject to the policies and procedures as outlined by MCW’s Office of Student Affairs.

Financial Aid Eligibility

Students must maintain acceptable academic progress to be eligible for Title IV financial aid programs, as set forth by federal regulations. Students who fail to maintain acceptable academic progress will lose financial aid eligibility. Please refer to the All Student Handbook for the current Financial Aid Satisfactory Academic Progress Policy.

Satisfactory Academic Progress

Students who fail to maintain the expected and acceptable rate of academic progress for any reason, whether because they encounter academic difficulties while on academic probation, or because of excessive leaves-of-absence, or because they fail to complete degree requirements within the requisite time limits, will be considered for dismissal from the Medical College of Wisconsin.

Leaves-of-Absence

Students may request a leave of absence for a number of reasons. All requests for leaves of absence must be approved by the Associate Dean for Student Affairs or her/his designee (see Leave of Absence policy). Students may take a leave of absence to pursue additional work (such as research or work toward an advanced degree) if they are in good academic standing. Such leaves of absence do not count against the time for degree completion. Students may take a personal leave of absence in accordance with the Leave of Absence policy. Students will be granted no more than twelve months of leave (including leaves mandated by the Academic Standing Committee, or school policy as a result of academic difficulty) from scheduled academic time during the entire duration of their enrollment at the Medical College. Students who take more than twelve months of leave will no longer be considered to be making satisfactory academic progress.

Attendance

Students are expected to attend all in-classroom, simulation, and clinical sessions. With the exception of unforeseen illness or emergency, failure to attend scheduled course activities will be considered unprofessional conduct and subject to Professional Conduct Standards policy.

Sick Leave and Absenteeism

If a student misses a didactic session, the student is responsible for learning the material presented at the missed session. If a student misses a simulation activity, the simulation activity may be rescheduled at the discretion of the program. All time missed from clinical activities must be made up. All make-up assignments must be coordinated with the program and the affiliated hospital. If additional time is not available, the student may not complete the course resulting in program extension. Clinical course requirements, including minimum hours and activities, are listed in the Clinical Course Syllabus and Guidebook. If a student misses three consecutive days due to illness of scheduled program activities, including classroom, simulation, clinical assignment, conference attendance, etc., must present medical

documentation for the absence.

Clinical Documentation

While on clinical rotations, students are required to document clinical time, log procedures, and gather daily evaluations from preceptors. Students are required to utilize their MCW-approved mobile device to complete the provided forms. Failure to submit forms that are complete and accurate by midnight following the end of the clinical shift, may be considered unprofessional conduct and subject to Professional Conduct Standards policy.

Professional Conduct Standards

All students are expected to exhibit professional behavior at all times, including but not limited to the following areas: classroom, simulation, clinical rotations, verbal and written communications, social media presence, completion of all program and curricular requirements, and maintaining a negative drug screen. Failure to do so may negatively impact student grades and lead to academic probation.

Professional Misconduct

If a student demonstrates unprofessional performance or behavior, they may be referred to MCW's Academic Standing and Professionalism Committee, and the MCW Associate Dean of Student Affairs. Professional misconduct may result in disciplinary sanctions including dismissal.

Non-Academic Policies

Orientation Policy

Accepted applicants must attend all orientation activities provided by MCW and the MSA Program. If an accepted applicant is not present for the first scheduled orientation activity, he or she will not be permitted to matriculate as scheduled, but may be given the option to defer to the next admissions cycle. Refer to the program's deferral policy.

Deferral Policy

Upon request, applicants may be offered one opportunity to defer admission. Any deferred admission must occur in the next available admission cycle.

Background Checks

Background check policy and procedures apply to incoming and continuing students.

MCW and the MSA Program are responsible for maintaining a safe learning environment for students, faculty, and staff. One method of ensuring this is through student background checks.

All MSA students are subject to federal and Wisconsin Caregiver background checks. Students who do not consent to a background check, or that report inaccurate information on the admission application, will not be considered for admission. Offers of admission will include a statement that the admission offer is pending the satisfactory completion of the background check.

Students who do not consent to a background check may be denied admission, suspended from courses or clinical rotations. Students with a history of criminal convictions will be referred to the Office of Student Affairs to determine eligibility for enrollment. Completion of the curriculum may involve clinical

rotations at affiliated hospitals, which may reserve the right to refuse placements. Inability to place the student may result in extension of the program timeline or failure to complete the degree requirements.

Drug Screening

Policy: Drug screening policy and procedures apply to incoming and continuing students.

MCW and the MSA Program are responsible for maintaining a safe learning environment for students, faculty, and staff. One method of ensuring this is through drug screenings.

All MSA students are subject to drug screenings. Offers of admission will include a statement that the admission offer is pending the satisfactory completion of the drug screen process. Students who do not consent to a drug screen or receive a positive result may be denied admission, suspended from courses including clinical rotations as determined by the Program in communication with the Dean of Student Affairs.

Procedures:

MSA students, prior to orientation and continuing throughout the course of the program, will undergo 10-panel urine drug screens. The screenings are facilitated by MCW's Office of Occupational Health or suitable facility and results are forwarded directly to the Program.

If a student receives a positive result, the student will be immediately suspended from academic and clinical activities and referred to the Dean of Student Affairs. Students will be asked to disclose the details of the failed screening, to include the type of substance(s) so that results may be reviewed for any unlawful or illicit activity, evidence of impairment while on duty, or behavior that poses a risk to the student, patients, or others. Such findings or refusal to disclose the results will result in dismissal from the Program.

Students with a positive drug test result will be subject to disciplinary sanctions. These sanctions could result in dismissal. An individual's participation in, and successful completion of, an approved drug or alcohol counseling program coupled with his/her consent to random testing may be considered in the disciplinary process but does not ensure that dismissal will not occur.

MSA Student Immunization Requirements

All students will be required to show evidence of having completed specific immunizations before having patient contact. MCW Occupational Health will facilitate the process and the requirements will be available in D2L prior to orientation day.

There may be exceptions to this policy which can be discussed on a case-by-case basis. There may also be additional requirements specific to certain MSA clinical rotation sites.

MSA Program Attire Guidelines

MSA students are expected to exhibit professionalism in attire. While attending classroom activities, appropriate dress for men includes slacks, shirt or sweater (tie optional); for women, skirt or dress of professional length, slacks, blouse or sweater. Inappropriate items include the following: denim, flip-flops, spandex, tee-shirts, sweat pants, athletic wear, halter or tank tops, short skirts or dresses, leggings with no skirt/dress, midriff tops, or low-cut tops. White coats will be required for visiting lectureships or other educational events as informed by the MSA Program staff. Scrubs will be required during

operating room and simulation activities.

When on clinical rotations, students are expected to dress business professional along with the white coat to and from the hospital. Each clinical site may have additional specific guidelines for dress which students are required to follow. Piercings are acceptable as long as the clinical site dress code is followed.

Proposed attire modifications from students must be submitted in writing to the Program Director for consideration.

Evaluation Process

Collecting student feedback is an important part of program evaluation and improvement. Students will be required to complete evaluations of courses, faculty, clinical affiliates, and the program. Failure to submit evaluations in a timely fashion may be considered unprofessional conduct and subject to Professional Conduct Standards policy.

Student Travel

The program's expectations for student conference travel are as follows.

1. AAAA required for all students
2. WSA required for 2nd + 3rd year
3. (ASA optional for 2nd + 3rd year)

If the student is receiving program funding for travel, he or she is representing the Medical College of Wisconsin, and must adhere to the policies set forth by the school and program. All travel documentation and receipts must be submitted to the Program offices no later than one week after the travel occurs.

Program funding for student travel, if provided, will be in a pre-determined amount typically based on a quad-occupancy approach. Students are required to receive program approval, prior to booking travel. Expenses in excess of the program funding are the responsibility of the student. Funding support can be requested from MCW's Office of Financial Aid on a case-by-case basis. Students traveling on alternate days outside of the program-approved travel days, will receive prorated reimbursement amounts.

Clinical Rotation Scheduling

The MSA program is responsible for scheduling all clinical rotation experiences for students. Revisions to the clinical schedule will occur at the discretion of the program. Offers from away rotations must be approved by the program and must reasonably fit into the student's overall clinical rotation schedule. Students may not accept an away rotation offer without first seeking the approval of the program. Away rotations may not conflict with scheduled specialty rotations, unless the away rotation site can offer the same or similar specialty experience. Students must be in good academic standing in order to be assigned away rotations. Once assigned, any elective or away rotation is considered mandatory as part of the student's clinical schedule; failure to attend the rotation will be subject to the absenteeism policy.

National Certification Exam

As a requirement for graduation, students will be required to sit for the National Commission for Certification of Anesthesiologist Assistants certification exam.

NSU's Dr. Pallavi Patel College of Health Care Sciences

MASTER OF SCIENCE IN ANESTHESIA

Jacksonville



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Anesthesiologist assistant students share their skills with children in the Philippines.



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- low student-to-faculty ratio
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- extensive resources
- clinical experience
- opportunities to aid urban and rural underserved populations
- interprofessional service-learning
- faculty and staff members who care about your success
- commitment to developing students of academic and clinical distinction

TABLE OF CONTENTS

| | |
|--|----|
| Message from the Dean | 2 |
| Anesthesiologist Assistant Profession | 4 |
| Program Overview | 6 |
| Certified Anesthesiologist Assistant Profession FAQ .. | 7 |
| Curriculum Outline | 9 |
| Distance Learning | 11 |
| Admissions Requirements | 12 |
| Student Housing | 13 |
| Application Procedures | 14 |
| Additional Sources of Information | 17 |
| Tuition and Fees | 18 |
| Expenses and Financial Aid | 19 |
| Jacksonville, Florida | 20 |
| Message from the HPD Chancellor | 23 |
| NSU's HPD Degree Programs | 24 |
| Health Professions Division Fast Facts | 27 |
| NSU Recognitions | 28 |

MESSAGE FROM THE DEAN



Nova Southeastern University's Dr. Pallavi Patel College of Health Care Sciences provides the highest quality of education to students in a variety of health care disciplines, including occupational, physical, and respiratory therapy; physician assistant; audiology; medical and cardiovascular sonography; anesthesiologist assistant; speech-language pathology; athletic training; exercise and sport science; and health sciences. We offer entry-level programs to advanced health care studies that allow professionals to continue with their lifelong learning. The cutting-edge curricula offered in our programs will help our students gain future success in their fields.

The college is committed to providing health care educational opportunities in formats that meet the needs of prospective students in the community. These formats include both the standard, face-to-face classroom approach and innovative distance electronics. By combining the most contemporary teaching modalities with state-of-the-art technology, our students are assured of obtaining the most comprehensive education possible.

The Dr. Pallavi Patel College of Health Care Sciences believes in excellence and innovation in teaching, research, service, and learning. This is made possible by having an academically skilled and professionally qualified faculty and staff. We have diverse faculty members. They come

from different backgrounds, have different degrees, and possess a wide range of educational experiences. Our faculty members are eager to share their knowledge of and expertise in the health care arena with their students. We also have an open-door policy that encourages students to seek answers to their questions, allowing them to develop a solid understanding of the materials that they study.

All these opportunities make the Dr. Pallavi Patel College of Health Care Sciences truly unique. The health care market is undergoing a rapid change. The pace of this change has provided a formidable challenge for institutions that provide the educational programs for future health care professionals. We are proud of the fact that we are training our students to become skilled and compassionate health care providers who are certain to make valuable contributions to the communities they serve. If you wish to become a graduate who is adequately prepared to assume a leadership role in health care, I encourage you to apply to our programs.

A handwritten signature in blue ink, appearing to read "Stanley Wilson". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Stanley Wilson, Ed.D., PT, CEAS
Dean, Dr. Pallavi Patel College of Health
Care Sciences



“We are proud of the fact that we are training our students to become skilled and compassionate health care providers.”

—Stanley Wilson

ANESTHESIOLOGIST ASSISTANT PROFESSION

Did You Know?

Certified anesthesiologist assistants work exclusively within the anesthesia care team environment as described by the American Society of Anesthesiologists.

Certified anesthesiologist assistants (CAAs), also known as anesthetists, are highly educated and skilled allied health professionals. They

- work under the supervision of physician anesthesiologists
- develop and implement anesthesia care plans
- possess a premedical background and a baccalaureate degree and complete a comprehensive didactic and clinical program at the graduate school level
- are trained extensively in the delivery and maintenance of quality anesthesia care, as well as advanced patient monitoring techniques

ACCREDITATION

Nova Southeastern University is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award associate's, baccalaureate, master's, educational specialist, doctorate, and professional degrees. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Nova Southeastern University.

NONDISCRIMINATION

Consistent with all federal and state laws, rules, regulations, and/or local ordinances (e.g., Title VII, Title VI, Title III, Title II, Rehab Act, ADA, Title IX, and the Florida Civil Rights Act), it is the policy of Nova Southeastern University not to engage in any discrimination or harassment against any individuals because of race, color, religion or creed, sex, pregnancy status, national or ethnic origin, nondisqualifying disability, age, ancestry, marital status, sexual orientation, gender, gender identity, military service, veteran status, or political beliefs or affiliations, and to comply with all federal and state nondiscrimination, equal opportunity, and affirmative action laws, orders, and regulations. Any such acts are unacceptable and strictly prohibited by the university.

In addition, the law prohibits retaliation against an individual for opposing any practices forbidden under this policy, for bringing a complaint of discrimination or harassment, for assisting someone with such a complaint, for attempting to stop such discrimination or harassment, or for participating in any manner in any investigation or resolution of a complaint of discrimination or harassment. This nondiscrimination policy applies to admissions; enrollment; scholarships; loan programs; athletics; employment; and access to, participation in, and treatment in all university centers, programs, and activities. NSU admits students of any race, color, religion or creed, sex, pregnancy status, national or ethnic origin, nondisqualifying disability, age, ancestry, marital status, sexual orientation, gender, gender identity, military service, veteran status, or political beliefs or affiliations, to all the rights, privileges, programs, and activities generally accorded or made available to students at NSU, and does not discriminate in the administration of its educational policies, admission policies, scholarship and loan programs, and athletic and other school-administered programs.

PURPOSE

The mission of NSU's anesthesiologist assistant (AA) program is to prepare students for lifelong learning and leadership roles that will benefit the health care community. The educational process will be committed to training and educating competent anesthesiologists who will embrace the anesthesia care team to provide safe, quality, and compassionate anesthesia care for all degrees of illness for the surgical patient.

PROGRAM OBJECTIVES

NSU's Master of Science in Anesthesia program is dedicated to developing a well-rounded practicing CAA. Faculty members and current students are dedicated to the following objectives:

- to prepare competent, entry-level anesthesiologist assistants in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains
- to develop vigilant, knowledgeable, skilled, and compassionate anesthesia care providers who are capable of functioning within the anesthesia care team model in the delivery of all perioperative anesthesia services
- to inspire and prepare the future leaders in our profession for service in local, state, and national organizations that shall advance the utilization and practice of CAAs
- to advance anesthesiologist assistant education through the application of state-of-the-art technology and evidence-based learning practices that continue to support our student learning objectives
- to develop highly skilled, interdisciplinary, and culturally sensitive faculty members and students who model professionalism and exemplify ethical practice, effective communication, and organizational leadership
- to support the mission and goals of NSU, including our department, college, and division, in the provision of scholarship, service, teaching, and patient care



PROGRAM OVERVIEW

NSU's Master of Science (M.S.) in Anesthesia Program in Jacksonville is in the process of obtaining initial accreditation by the Committee on Accreditation (CoA) of the Commission on Accreditation of Allied Health and Education Programs (CAAHEP), the Accreditation Review Committee for the Anesthesiologist Assistant (ARC-AA).

Students are trained in state-of-the-art facilities. These include two fully functional operating rooms with high-fidelity simulators, a regional anesthesia block laboratory, and examination rooms, as well as a mock postoperative and intensive care unit. Technologically advanced classrooms, student lounge, and study center area complete the facilities.

Did You Know?

NSU's M.S. in Anesthesia programs are the only ones in the country to have four high-fidelity anesthesia simulators (two adult, one pediatric, and one baby).

The first year (semesters 1, 2, 3, and 4) presents an in-depth course of study in the fundamentals of anesthesia through interaction with highly qualified faculty members and the latest available anesthesia technology.

Clinical experience begins in the first year. The didactic curriculum, complemented by simulation learning, will provide the student with the necessary skills to meet the clinical objectives of the curriculum.

The senior year (semesters 5, 6, and 7) consists of clinical rotations assigned in intervals ranging from two weeks to two months. Clinical rotations include days, evenings, nights, weekends, and on-call, depending upon the rotation.

Clinical rotations are full time and involve all anesthesia subspecialties, including

- general surgery
- genitourinary surgery
- pediatrics
- vascular surgery
- obstetrics and gynecology
- cardiac surgery
- otolaryngology
- thoracic surgery
- orthopedics
- transplantation
- neurosurgery
- trauma
- ophthalmology

Due to the highly integrated curriculum, admitted students are required to complete the entire course of study. No advanced placement, transfer of credit, or credit for experiential learning will be granted. All students are discouraged from gaining employment at any time while in the program.

Did You Know?

NSU's M.S. in Anesthesia programs prepare students for the national certification exam administered under the authority of the National Commission for the Certification of Anesthesiologist Assistants.

CERTIFIED ANESTHESIOLOGIST ASSISTANT PROFESSION FAQ

What is the typical job description for a Certified Anesthesiologist Assistant (CAA)?

A CAA is a highly skilled professional who practices as an extension of the licensed anesthesiologist (specialist physician) exclusively within the anesthesia care team environment. The tasks that CAAs perform promote patient safety and ensure optimal health outcomes. In addition to operating anesthesia equipment, monitoring patients, and providing quality anesthesia care, CAAs are also trained to assist in life-saving measures.

Did You Know?

Specific job descriptions and duties of CAAs may differ according to geographic area and local practice. State law or board of medicine regulations or guidelines may further define CAA job descriptions.

What duties are performed by a CAA?

Under the direction of a qualified anesthesiologist, CAA functions include, but are not limited to,

- obtaining an appropriate and accurate preanesthetic health history
- performing an appropriate physical examination
- recording pertinent data in an organized and legible manner
- conducting diagnostic laboratory and related studies as appropriate (such as drawing arterial and venous blood samples)
- performing and monitoring regional anesthesia including (but not limited to)
 - ♦ spinal
 - ♦ epidural
 - ♦ IV regional
 - ♦ other special techniques, such as local infiltration and nerve blocks
- performing the insertion of invasive monitoring modalities for
 - ♦ arterial lines
 - ♦ pulmonary artery catheterization
 - ♦ central venous lines, as delegated by the supervising anesthesiologist
- administering anesthetic agents and any controlled substances under the medical direction of a supervising anesthesiologist including (but not limited to)
 - ♦ administration of induction agents
 - ♦ maintenance and alteration of anesthesia levels
 - ♦ administration of adjunctive treatment
 - ♦ provision of continuity of anesthetic care into and during the postoperative recovery period
- establishing airway interventions and performing ventilatory support
- applying and interpreting advanced monitoring techniques
- using advanced life support techniques such as high-frequency ventilation and intra-arterial cardiovascular assist devices
- making post-anesthesia patient rounds by recording patient progress notes, compiling and recording case summaries, and transcribing standing and specific orders
- evaluating and treating life-threatening situations, such as cardiopulmonary resuscitation, based on established protocols (BLS, ACLS, and PALS)

- performing duties in intensive care units, pain clinics, and other settings, as appropriate
- training and supervising personnel in the calibration, troubleshooting, and use of patient monitors
- performing administrative duties in an anesthesiology practice or anesthesiology department, such as
 - patient record management
 - procedure coding and billing
 - management of personnel
- participating in the clinical instruction of others

What is the accrediting body for this program?

The Commission on Accreditation of Allied Health Education Programs (CAAHEP) accredits AA training programs.

Commission on Accreditation of Allied Health Education Programs

25400 U.S. Highway 19 North, Suite 158
Clearwater, FL 33763

(727) 210-2350

(727) 210-2354 fax

caahep.org

What is the certification process for a CAA?

Graduates or senior students in an anesthesiologist assistant (AA) educational program that has been accredited by CAAHEP may apply for initial certification. Initial certification is awarded to an AA who has successfully completed the Certifying Examination for Anesthesiologist Assistants administered by the NCCAA in collaboration with the National Board of Medical Examiners (NBME). Certified AAs are permitted to use the designation “CAA” to indicate that they are currently certified.

Does a CAA have to recertify?

Yes. In order to maintain certification after passing the initial examination, CAAs must submit documentation to the NCCAA that they have completed 40 hours of continuing medical education every two years. In addition, every six years, they must pass the Examination for Continued Demonstration of Qualifications.

Where would a CAA practice?

The use of CAAs within the anesthesia care team across the country is a dynamic and evolving process.

 **TIP**

For the latest and most accurate information about the range of practice opportunities, please contact your state board of medicine or the American Academy of Anesthesiologist Assistants.

CURRICULUM OUTLINE

CHART YOUR COURSE FOR SUCCESS!

| | |
|-------------------------|---|
| Start Date: | May |
| Length: | 27 Months |
| Degree: | Master of Science in Anesthesia |
| Total Credit Hours: | 117 |
| Minimum Clinical Hours: | 2,000 |
| Note: | All courses with the MHS prefix will be taken online. |

Summer—Semester I (May–August)

| COURSE # | COURSE TITLE | CREDIT HOURS |
|---------------------------|-------------------------------------|--------------|
| ANEJ 5048 | Medical Terminology | 1 |
| ANEJ 5081 | Introduction to Clinical Anesthesia | 2 |
| ANEJ 5301 | Anesthesia Laboratory I | 3 |
| ANEJ 5328 | ECG for Anesthesiologist Assistant | 2 |
| ANEJ 5621 | Principles of Airway Management I | 2 |
| ANEJ 5420 | Anatomy | 4 |
| PHS 5400 | Physiology | 4 |
| TOTAL CREDIT HOURS | | 18 |

Fall—Semester II (August–December)

| COURSE # | COURSE TITLE | CREDIT HOURS |
|---------------------------|--|--------------|
| ANEJ 5302 | Anesthesia Laboratory II | 3 |
| ANEJ 5462 | Pharmacology for Anesthesia I | 2 |
| ANEJ 5601 | Applied Physiology for Anesthesia Practice I | 3 |
| ANEJ 5622 | Principles of Airway Management II | 2 |
| ANEJ 5801 | Instrumentation and Monitoring | 2 |
| ANEJ 5901 | Anesthesia Principles and Practices I | 2 |
| ANEJ 5104 | Principles of Life Support* | 3 |
| ANEJ 5101 | Student Lecture Series I | 1 |
| MHS 5205 | Writing for Medical Publications | 3 |
| TOTAL CREDIT HOURS | | 21 |

* Basic Life Support Certification and Advanced Cardiac Lifesaving will be obtained during this semester.

Winter—Semester III (January–May)

| COURSE # | COURSE TITLE | CREDIT HOURS |
|---------------------------|---|--------------|
| ANEJ 5001 | Clinical Anesthesia I | 4 |
| ANEJ 5303 | Anesthesia Laboratory III | 3 |
| ANEJ 5463 | Pharmacology for Anesthesia II | 2 |
| ANEJ 5602 | Applied Physiology for Anesthesia Practice II | 3 |
| ANEJ 5102 | Student Lecture Series II | 1 |
| ANEJ 5902 | Anesthesia Principles and Practices II | 2 |
| TOTAL CREDIT HOURS | | 15 |

CURRICULUM OUTLINE, *continued*

Summer—Semester IV (May–August)

| COURSE # | COURSE TITLE | CREDIT HOURS |
|---------------------------|--|--------------|
| ANEJ 5000 | Professional Issues in Anesthesiologist Assistant Practice | 2 |
| ANEJ 5002 | Clinical Anesthesia II | 3 |
| ANEJ 5304 | Anesthesia Laboratory IV | 3 |
| ANEJ 5603 | Applied Physiology for Anesthesia Practices III | 2 |
| ANEJ 5903 | Anesthesia Principles and Practices III | 2 |
| ANEJ 5103 | Student Lecture Series III | 1 |
| ANEJ 5500 | Principles and Practice of Ultrasound-Guided Regional Anesthesia and Vascular Access | 3 |
| ANEJ 5107 | Internship | 5 |
| TOTAL CREDIT HOURS | | 21 |

Pediatric Advanced Cardiac Lifesaving will be obtained during this semester.

Clinical Year, Fall—Semester V (September–December)

| COURSE # | COURSE TITLE | CREDIT HOURS |
|---------------------------|-------------------------|--------------|
| ANEJ 6001 | Clinical Anesthesia III | 13 |
| TOTAL CREDIT HOURS | | 13 |

Clinical Year, Winter—Semester VI (January–May)

| COURSE # | COURSE TITLE | CREDIT HOURS |
|---------------------------|------------------------|--------------|
| ANEJ 6002 | Clinical Anesthesia IV | 15 |
| ANEJ 6110 | Anesthesia Review | 2 |
| TOTAL CREDIT HOURS | | 17 |

Clinical Year, Summer—Semester VII (June–August)

| COURSE # | COURSE TITLE | CREDIT HOURS |
|---------------------------|-----------------------|--------------|
| ANEJ 6003 | Clinical Anesthesia V | 12 |
| TOTAL CREDIT HOURS | | 12 |

Curriculum is subject to change by the department.

DISTANCE LEARNING

NSU's Master of Science in Anesthesia curriculum includes some coursework designed to be completed in a distance-learning format. These courses complement student learning through interactive activities taught by our experienced faculty.

Students in the program are provided with NSU online accounts that include email. Students must obtain their own Internet service providers (ISP), use their own computer systems (PC or Apple Macintosh), and purchase a smartphone. New students receive an orientation and extensive online technical support dealing with online access, online tools and methods, and library resources.

The online medical database collection at NSU is extensive and includes access to quality subscription services that are free for students.

Computer Requirements

All students are required to have a computer with the following minimum specifications:

- 2 GB RAM
- video and monitor capable of 1024 X 768 resolution or better
- sound card and speakers
- high-speed Internet connection with Internet service provider
- Windows 7 or equivalent MAC OS minimum
- Microsoft Office 2000 or newer with PowerPoint, Word, and Excel minimum
- printer capability
- Android or iPhone smartphone (for use with electronic evaluations)



ADMISSIONS REQUIREMENTS

Prospective NSU anesthesiologist assistant students are selected by the Committee on Admissions (COA), which considers the overall qualities of the applicant.

Areas of consideration include

- interpersonal skills
- life experiences
- knowledge and understanding of the AA profession and the anesthesia care team
- academic performance and level of achievement
- personal motivation
- recommendations

Personal interviews are offered to the most qualified applicants to assess interpersonal and communication skills, altruistic attitude, maturity, and commitment to the AA profession and anesthesia care team model.

Applicants must submit the following directly to the Centralized Application Service for Anesthesiologist Assistants (CASAA):

1. evidence of a baccalaureate degree from a nationally recognized and regionally accredited college or university, including above-average performance in courses required in a premed curriculum (refer to required courses below)

Required Courses

| Course | # of Semesters Needed |
|---|------------------------------|
| • General biology with lab OR Anatomy and physiology with lab | 2 |
| • General chemistry with lab | 2 |
| • Organic chemistry with lab | 1 |
| • Biochemistry | 1 |
| • General Physics with lab | 2 |
| • Calculus | 1 |
| • English composition | 1 |

Preferred Courses—Not Required

| Course | # of Semesters Needed |
|-----------------------------------|------------------------------|
| • Anatomy with lab | 1 |
| • Physiology | 1 |
| • Organic chemistry | a second semester |
| • Microbiology* | 1 |
| • Cellular and molecular biology* | 1 |

In order to meet prerequisite requirements, math and science courses must include sufficient rigor and detail in the discipline (introductory, survey, or business courses will not satisfy the requirements).

* An advanced course in microbiology or cellular and molecular biology is preferred and would meet one semester of the general biology requirement. 1 semester = 1.5 quarters

Did You Know?

A 2.0 (C) or better is required in all prerequisite classes.

2. all official transcripts from all undergraduate, graduate, and professional institutions attended (sent directly from the institution)
3. evidence of a minimum cumulative GPA of 2.75 on a 4.0 grading scale—minimum GPA of 3.25 preferred
4. official Graduate Record Examination (GRE) or Medical College Admissions Test (MCAT) scores
5. three letters of recommendation from individuals familiar with the applicant's prior academic performance, potential, character, work habits, and suitability for graduate study leading into a career in clinical practice

(Recommendations from personal health care providers, family, or personal family friends are not acceptable.)
6. documented anesthesia exposure—by observation in the operating room—of at least eight hours
7. summary of an article published in a current anesthesia journal
8. demonstrated evidence of computer skills, through coursework or self-study, prior to the end of the first semester (instruction may be obtained through NSU Student Microcomputer Laboratory or other training facilities)

The applicant who has graduated from a college or university of a country for which English is not the primary language, regardless of United States residency status, must take the computerized Test of English as a Foreign Language (TOEFL). An official set of scores must be sent directly from the Educational Testing Service in Princeton, New Jersey, to NSU's Enrollment Processing Services (EPS).

STUDENT HOUSING

The NSU Jacksonville Campus does not offer on-campus housing. However numerous apartments, condominiums, and other rental facilities are located near the campus. Information about housing can be obtained by contacting

Nova Southeastern University

Admissions Counselor

Anesthesiologist Assistant—Jacksonville

6675 Corporate Center Parkway, Suite 115

Jacksonville, FL 32216-8080

(904) 245-8913

APPLICATION PROCEDURES

STEPS SUMMARY

1. Apply to the Centralized Application Service for Anesthesiologist Assistants (CASAA).
2. Send supporting documents to CASAA.
 - all official transcripts
 - three letters of recommendation
 - résumé
 - official GRE or MCAT scores
 - anesthesia exposure form
 - anesthesia literature summary
3. Submit a nonrefundable, \$50 application fee with your supplemental application.

DETAILS

The CASAA application must be submitted before January 15 of the matriculation year. Students matriculate each May.

1. **Apply to CASAA.** Nova Southeastern University participates in the Centralized Application Service for Anesthesiologist Assistants (CASAA) for the receipt and processing of all applications. CASAA takes no part in the selection of students. CASAA application packets may be obtained and submitted online at casaa.liaisoncas.com.
2. **Send supporting documents directly to CASAA.**
 - a. All official college transcripts from all undergraduate, graduate, and professional institutions attended must be sent to CASAA directly from the institutions. Coursework taken at foreign institutions must be evaluated for U.S. institution equivalence by an approved National Association of Credential Evaluation Services (NACES) organization, such as one of the services listed.

World Education Services, Inc.
Bowling Green Station
P.O. Box 5087
New York, NY 10274-5087

(212) 966-6311 • wes.org

Educational Credential Evaluators
P.O. Box 514070
Milwaukee, WI 53203-3470

(414) 289-3400 • ece.org

**Josef Silny & Associates, Inc.,
International Education Consultants**
7101 SW 102 Avenue
Miami, FL 33173

(305) 273-1616 • (305) 273-1338 fax
info@jsilny.org • jsilny.org

It is the applicant's responsibility to have this coursework evaluated. An official course-by-course evaluation with a cumulative grade point average must be sent directly from the evaluation service to CASAA and NSU's Enrollment Processing Services (EPS).

- b. Send three evaluation forms from supervisors or colleagues, clinical or nonclinical.
- c. Send official GRE or MCAT scores. The NSU GRE code number is **4784**.
 - Official GRE or MCAT scores must be submitted directly to CASAA.
 - Scores must be less than five years old.
 - Scores must be received by the CASAA application deadline.
- d. Send your résumé or curriculum vitae and copies of your national and professional certifications or licenses from a recognized certifying body (if applicable).
- e. Submit a summary of an article published in a current anesthesia journal.
- f. Supply evidence of a minimum of eight hours of documented anesthesia exposure.

✓ TIP

Be certain to take the GRE or MCAT early enough for official scores to be received by the CASAA deadline of January 15 of the matriculation year. The admissions committee begins interviewing students as early as September prior to the matriculation year.

3. Complete an NSU supplemental application and submit a \$50, nonrefundable application fee. Once the CASAA application has been received, the NSU supplemental application will be available online. Completed NSU applications without a completed and verified CASAA application will not be considered.

Did You Know?

The CASAA application process runs from June 1 to January 15 of the matriculation year. The NSU supplemental application deadline is February 15 of the matriculation year. All applicants must apply through CASAA prior to completing the NSU application.

After NSU receives the verified CASAA application, the supplemental application, the \$50 fee, and official GRE or MCAT scores, the applicant's application will be reviewed. The Committee on Admissions will not consider an application until all required fees, credentials, and evaluations have been received by NSU.

PROVISIONAL ACCEPTANCE

Students are provisionally admitted to a degree-seeking program based on a review of unofficial transcripts or other specific program admission requirements. However, this admission includes a condition that final and official transcripts, documents, and requirements must be received within 90 calendar days from matriculation. If these final and official transcripts, documents, and/or requirements are not received by that time, the student will not be allowed to continue class attendance. Financial aid will not be disbursed to a provisional/conditional student until he or she has been fully admitted as a regular student (all admissions requirements have been approved by the college/program admissions office). Students who have an unpaid balance 30 days from the start of the term will be assessed a \$100 late fee.

APPLICATION PROCEDURES, *continued*

PERSONAL INTERVIEW

Personal interviews are by invitation only and are an integral part of the admissions process. Not all applicants will be granted an interview by the program, and an interview is not a guarantee of admission. NSU's program processes applications on a "rolling" or periodic basis. It is in the best interest of prospective students to complete their applications early because of the limited number of positions in the class.

CURRENT COLLEGE COURSEWORK

All prerequisite coursework must be completed by the start of class to be considered for admission. In order to meet prerequisite requirements, math and science courses must include sufficient rigor and detail in the discipline (introductory, survey, or business courses will not satisfy the requirements). If, at the time of the application, coursework is in progress or anticipated, please identify these courses on the supplemental application.

TRANSCRIPTS

All NSU applicants who are accepted must submit official transcripts of all completed coursework and all courses in progress to the NSU Enrollment Processing Services prior to matriculation. It is the responsibility of the applicant to ensure that arrangements are made for these transcripts to be sent to

Nova Southeastern University

Enrollment Processing Services

Dr. Pallavi Patel College of Health Care Sciences

Anesthesiologist Assistant Admissions

3301 College Avenue, P.O. Box 299000

Fort Lauderdale, FL 33329-9905

Transcripts can be sent electronically from the originating college/university to electronictranscripts@nova.edu.



ADDITIONAL SOURCES OF INFORMATION

With an emphasis on leadership and professional development, and to maximize the governmental and political understanding of the AA profession, students in the Master of Science in Anesthesia Program at NSU will be required to obtain student membership with the following organizations:

- American Academy of Anesthesiologist Assistants (AAAA)
- American Society of Anesthesiologists (ASA)
- Florida Society of Anesthesiologists (FSA)
- Florida Academy of Anesthesiologists Assistants (FAAA)

Participation via attendance at the annual conferences for the organizations listed above is highly encouraged.

- For information on a career as a certified anesthesiologist assistant, contact
American Academy of Anesthesiologist Assistants
1231 Collier Road, NW, Suite J
Atlanta, GA 30318
(678) 222-4221
(404) 249-8831 fax
info@anesthetist.org
anesthetist.org
- For information on the certification process for certified anesthesiologist assistants, contact
National Commission for Certification of Anesthesiologist Assistants
100 Cynthia Street
Williamstown, KY 41097
(859) 903-0089
business.office@aa-nccaa.org
nccaa.org
- For accreditation information, contact
Commission on Accreditation of Allied Health Education Programs (CAAHEP)
25400 U.S. Highway 19 North, Suite 158
Clearwater, FL 33763
(727) 210-2350
(727) 210-2354 fax
- For information about the anesthesia care team, contact
American Society of Anesthesiologists
520 N. Northwest Highway
Park Ridge, IL 60068-2573
asahq.org
and/or
Florida Society of Anesthesiologists
701 Brickell Avenue, Suite 1550
Miami, FL 33131
(786) 300-3183
(310) 437-0585 fax
executiveoffice@fsahq.org
fsahq.org
- For information about NSU's Master of Science in Anesthesia Program or to request an AA admissions application packet, please contact the NSU AA Jacksonville Admissions Counselor.
Nova Southeastern University
Anesthesia Assistant Program
Admissions Counselor
6675 Corporate Center Parkway
Suite 115
Jacksonville, FL 32216-8080
(904) 245-8913
800-356-0026, ext. 21101
nova.edu/healthsciences/anesthesia/jacksonville

Disclaimer: Links to non-NSU sites are provided for your convenience and do not constitute an endorsement.

TUITION AND FEES



Tuition for 2021–2022 will be posted on our website (nova.edu/healthsciences/anesthesia).

A Health Professions Division general access fee of \$145 is required each year. An NSU student services fee of \$1,500 is also required annually. In addition, a clinical support fee of \$475 will be assessed in each of the five semesters of clinical training. All tuition and fees are subject to change by the board of trustees without notice.

1. Acceptance Fee—\$500. This fee is required to reserve the accepted applicant's place in the entering first-year class, but is not refundable in the event of a withdrawal. It is payable within two weeks of an applicant's acceptance.
2. Deposit—\$250. This is due February 15, under the same terms as the Acceptance Fee.
3. Preregistration Fee—\$250. This is due April 15, under the same terms as the Acceptance Fee.

The first semester's tuition and fees, less the \$1,000 previously paid, are due on or before registration day. Tuition for each subsequent semester is due on or before the appropriate registration day. Students will not be admitted until their financial obligations have been met. The financial ability of applicants to complete their training at the college is important because of the limited number of positions available in each class. Applicants should have specific plans for financing 27 months of professional education. This should include tuition, living expenses, books, equipment, and miscellaneous expenses.

Each student is required to carry adequate personal medical and hospital insurance. Students may avail themselves of the hospitalization insurance plan obtainable through the university.

EXPENSES AND FINANCIAL AID

Students should anticipate spending approximately \$36,000 per year for living expenses. In addition, students should anticipate spending \$5,000 for books and equipment during the 27-month program. If a student participates in clinical rotations outside the South Florida area, the student may incur additional housing and other living expenses.

The primary financial responsibility for a student's education rests with the student and his or her family. Economic circumstances for some families may make it necessary for the student to obtain assistance from other sources.

The purpose of the Student Financial Assistance Program at NSU is to help as

many qualified students as possible to complete their health professions education. Various loans, scholarships, and grants are available to qualified students to help ease the high cost of a health professions education. These financial assistance programs are described in a variety of separate university publications.

For information, contact

Nova Southeastern University
Office of Student Financial Assistance
3301 College Avenue
Fort Lauderdale, FL 33314-7796
(954) 262-3380
800-806-3680

✓ TIP

A limited number of part-time work assignments are available. However, due to the demands of the program curriculum, the program strongly discourages any outside employment.



JACKSONVILLE, FLORIDA

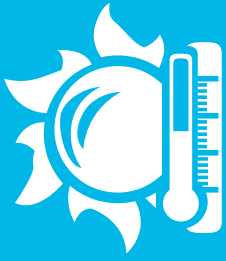


Experience Jacksonville—A Different Side of Florida

Located on the banks of the St. Johns River in northeast Florida, Jacksonville—known as “Jax” to the locals—offers art and culture, history, and exciting outdoor adventures. Named one of “21 Super Cool U.S. Cities” by Expedia, Jacksonville has a mild climate, reasonable cost of living, and high quality of life. The city is popular for corporate expansions and relocations, and it serves as a leading distribution center with a transportation network that includes shipping, train, and trucking routes.

The city has found a balance for fostering growth in industries such as technology and real estate, while promoting diverse cultural opportunities and protecting natural assets. There are miles of beaches, world-class fishing, coastal cuisine, historic neighborhoods, a dynamic public arts scene, and a vibrant nightlife. Jacksonville maintains the largest urban park system in the country, including 400 city parks, 7 state parks, and 2 national parks. In addition, Jax hosts thrilling sporting events, as the home to the NFL’s Jacksonville Jaguars and college football’s annual Gator Bowl, as well hockey, basketball, soccer, and rugby teams.

Nova Southeastern University students in Northeast Florida experience programs and resources at the regional campus in Jacksonville, located off I-95 and Bowden Road. Day, evening, weekend, and online courses are offered.



71°
Fahrenheit

Average Temperature

ACTIVITIES



HOME TO



**JUMBO
SHRIMP
BASEBALL**



THE
**JACKSONVILLE
JAGUARS**

**ARMADA
SOCCER**



AND THE
GATOR BOWL

ATTRACTIONS



JACKSONVILLE
ZOO
AND GARDENS

M⁺SH Museum of
Science & History
JACKSONVILLE • FLORIDA

CATTY SHACK RANCH

WILDLIFE SANCTUARY

**CUMMER
MUSEUM**
ART | GARDENS | EDUCATION

RITZ
**THEATRE AND
MUSEUM**

LARGEST
Urban Park System
with more than
80,000 acres



22
miles of
beaches





MESSAGE FROM THE HPD CHANCELLOR



The past few years have been incredibly productive for the Nova Southeastern University (NSU) Health Professions Division (HPD), and more achievements are on the way.

At NSU, we are always looking toward the future. The HPD now offers more than 60 degree and certificate programs through its 8 colleges at the university's campuses in Fort Lauderdale/Davie, Fort Myers, Jacksonville, Miami, Miramar, Orlando, Palm Beach, Tampa Bay, and Puerto Rico.

In terms of our academic structure, we are always looking to enhance the educational experience for our students. This is accomplished by implementing the most cutting-edge technology, as well as through our various, and sometimes subtle, curricular revisions.

In August 2019, we celebrated a milestone in the university's history with the official opening of the 311,000-square-foot NSU Tampa Bay Regional Campus located in Clearwater, Florida. It is one of the most highly advanced instructive sites in the United States. The new campus, which offers the most progressive pedagogy and technology possible, also features distinctive design aspects to provide students with the optimal educational experience.

The Tampa Bay Regional Campus houses an additional site for NSU's Dr. Kiran C. Patel College of Osteopathic Medicine, which is the original school of the university's Health Professions Division. However, the Dr. Pallavi Patel College of Health Care Sciences and the Ron and Kathy Assaf College of Nursing are also represented there. These colleges stand alongside each other, not as separate programs or separate schools, but as collaborative and collegial health education entities.

In keeping with NSU's progressive trend, the Martin and Gail Press HPD Library at the Fort Lauderdale/Davie Campus was revamped, replacing written texts with a digital workspace. This allows students to immediately access a wealth of databases and has almost tripled the amount of information that was previously available to them.

Thanks to the commitment of so many dedicated and talented people, the HPD's future is brighter than ever.

A handwritten signature in blue ink, reading "Frederick R. Lippman". The signature is fluid and cursive.

Frederick R. Lippman, R.Ph., Ed.D.
HPD Chancellor, Special Projects

NSU'S HEALTH PROFESSIONS DIVISION

Dr. Kiran C. Patel College of Osteopathic Medicine

- Doctor of Philosophy in Family Therapy (Ph.D.)
- Doctor of Marriage and Family Therapy (D.M.F.T.)
- Doctor of Osteopathic Medicine (D.O.)
- Master of Public Health (M.P.H.)
- Master of Science in Biomedical Informatics (M.S.)
- Master of Science in Disaster and Emergency Management (M.S.)
- Master of Science in Family Therapy (M.S.)
- Master of Science in Medical Education (M.S.)
- Master of Science in Nutrition (M.S.)
- Bachelor of Science in Human Development and Family Studies (B.S.)
- Bachelor of Science in Human Nutrition (B.S.)
- Bachelor of Science in Public Health (B.S.)
- Bachelor of Science in Health and Wellness Coaching (B.S.)
- Graduate Certificate in Emergency Medicine
- Graduate Certificate in Family Studies
- Graduate Certificate in Functional Nutrition and Herbal Therapy
- Graduate Certificate in Health Education
- Graduate Certificate in Health Professions Preparation
- Graduate Certificate in Medical Informatics
- Graduate Certificate in Public Health
- Graduate Certificate in Public Health Informatics
- Graduate Certificate in Social Medicine
- Graduate Certificate in Solution-Focused Coaching

College of Pharmacy

- Master of Science in Pharmaceutical Sciences (M.S.)
 - * Concentration in Drug Development (Pharmaceutics)
 - * Concentration in Molecular Medicine and Pharmacogenomics
 - * Concentration in Social and Administrative Pharmacy
- Doctor of Pharmacy (Pharm.D.)
- Doctor of Philosophy in Pharmaceutical Sciences (Ph.D.)
 - * Concentration in Drug Development (Pharmaceutics)
 - * Concentration in Molecular Medicine and Pharmacogenomics
 - * Concentration in Social and Administrative Pharmacy

College of Optometry

- Doctor of Optometry (O.D.)
- Master of Science in Clinical Vision Research (M.S.)
- Bachelor of Science in Vision Science (B.S.)
- Graduate Certificate in Clinical Vision Research

Dr. Pallavi Patel College of Health Care Sciences

- Bachelor of Science—Cardiovascular Sonography (B.S.)
- Bachelor of Science in Exercise and Sport Science (B.S.)
- Bachelor of Health Science (B.H.Sc.)
- Bachelor of Science—Medical Sonography (B.S.)
- Bachelor of Science in Respiratory Therapy (B.S.)
- Bachelor of Science in Speech-Language and Communication Disorders (B.S.)
- Master of Science in Anesthesia (M.S.)
- Master of Health Science (M.H.Sc.)
- Master of Occupational Therapy (M.O.T.)
- Master of Medical Science in Physician Assistant (M.M.S.)

DEGREE PROGRAMS

- Master of Science in Speech-Language Pathology (M.S.)
- Master of Science in Sports Science (M.S.)
- Doctor of Audiology (Au.D.)
- Doctor of Health Science (D.H.Sc.)
- Doctor of Philosophy in Health Science (Ph.D.)
- Entry-Level Doctor of Occupational Therapy (O.T.D.)
- Doctor of Occupational Therapy (Dr.O.T.)
- Doctor of Philosophy in Occupational Therapy (Ph.D.)
- Doctor of Physical Therapy (D.P.T.)
 - * Professional Doctor of Physical Therapy (D.P.T.)
 - * Postprofessional Doctor of Physical Therapy: Transition (D.P.T.)
- Doctor of Philosophy in Physical Therapy (Ph.D.)
- Doctor of Speech-Language Pathology (SLP.D.)
- Certificate in Audiologist Assistant
- Graduate Certificate in Clinical Research Associate
- Graduate Certificate in Clinical Trial Manager

College of Dental Medicine

- Doctor of Dental Medicine (D.M.D.)
- Master of Science in Dentistry (M.S.)
- Postgraduate Certificate in Advanced Education in General Dentistry
- Postgraduate Certificate in Endodontics
- Postgraduate Certificate in Operative Dentistry
- Postgraduate Certificate in Oral and Maxillofacial Surgery
- Postgraduate Certificate in Orthodontics and Dentofacial Orthopedics
- Postgraduate Certificate in Pediatric Dentistry
- Postgraduate Certificate in Periodontics
- Postgraduate Certificate in Prosthodontics
- Postgraduate Certificate in Special Needs Dentistry
- Craniofacial Research Fellowship Program

Ron and Kathy Assaf College of Nursing

- Bachelor of Science in Nursing (B.S.N.)
- Master of Science in Nursing (M.S.N.)
 - * Traditional Concentrations
 - Executive Nurse Leadership
 - Nursing Education
 - Nursing Informatics
 - * Nurse Practitioner Concentrations (Advanced Practice Registered Nurse)
 - Adult-Gerontology Acute Care Nurse Practitioner
 - Family Nurse Practitioner
 - Psychiatric-Mental Health Nurse Practitioner
- Postgraduate Certificates
 - * Adult-Gerontology Acute Care Nurse Practitioner
 - * Family Nurse Practitioner
 - * Psychiatric-Mental Health Nurse Practitioner
- Doctor of Nursing Practice (D.N.P.)
- Doctor of Philosophy in Nursing (Ph.D.)

Dr. Kiran C. Patel College of Allopathic Medicine

- Master of Biomedical Sciences (M.B.S.)
- Doctor of Medicine (M.D.)

NSU'S HEALTH PROFESSIONS DIVISION DEGREE PROGRAMS

Dual Degrees


- Bachelor of Science—Cardiovascular Sonography (B.S.) and Master of Health Science (M.H.Sc.)
- Bachelor of Science—Medical Sonography (B.S.) and Master of Health Science (M.H.Sc.)
- Master of Health Science (M.H.Sc.)/Doctor of Health Science (D.H.Sc.)
- Master of Health Science (M.H.Sc.)/Doctor of Philosophy in Health Science (Ph.D.)
- Master of Science in Nursing (M.S.N.)/Doctor of Nursing Practice (D.N.P.)

Concurrent Degrees

- Doctor of Osteopathic Medicine (D.O.)/Master of Science in Medical Education (M.S.)
- Doctor of Osteopathic Medicine (D.O.)/Master of Public Health (M.P.H.)
- Doctor of Osteopathic Medicine (D.O.)/Master of Science in Biomedical Informatics (M.S.)
- Doctor of Osteopathic Medicine (D.O.)/Master of Science in Disaster and Emergency Management (M.S.)
- Doctor of Osteopathic Medicine (D.O.)/Master of Science in Nutrition (M.S.)
- Doctor of Pharmacy (Pharm.D.)/Master of Business Administration (M.B.A.)
- Doctor of Pharmacy (Pharm.D.)/Master of Public Health (M.P.H.)
- Doctor of Pharmacy (Pharm.D.)/Master of Science in Biomedical Informatics (M.S.)
- Doctor of Optometry (O.D.)/Master of Public Health (M.P.H.)
- Doctor of Audiology (Au.D.)/Master of Business Administration (M.B.A.)
- Master of Medical Science (M.M.S.)/Master of Public Health (M.P.H.)
- Doctor of Dental Medicine (D.M.D.)/Master of Public Health (M.P.H.)
- Doctor of Dental Medicine (D.M.D.)/Master of Business Administration (M.B.A.)



HEALTH PROFESSIONS DIVISION FAST FACTS



8,000+
STUDENTS

1 OF ONLY 3
UNIVERSITIES IN THE U.S.
WITH MEDICAL SCHOOLS
OFFERING BOTH
D.O. and M.D. DEGREES



8 COLLEGES

- DR. KIRAN C. PATEL COLLEGE OF OSTEOPATHIC MEDICINE
- COLLEGE OF PHARMACY
- COLLEGE OF OPTOMETRY
- DR. PALLAVI PATEL COLLEGE OF HEALTH CARE SCIENCES
- COLLEGE OF MEDICAL SCIENCES
- COLLEGE OF DENTAL MEDICINE
- RON AND KATHY ASSAF COLLEGE OF NURSING
- DR. KIRAN C. PATEL COLLEGE OF ALLOPATHIC MEDICINE

\$70-MILLION

HEADQUARTERS COMPLEX IN
FORT LAUDERDALE/DAVIE FLORIDA



**NEW
TAMPA BAY
REGIONAL
CAMPUS**

**SPECIAL
LEARNING
OPTIONS**

- » Regional Campuses
- » Online
- » Dual Degrees

NSU's Health Professions Division (HPD), with a student body of more than 8,000, is home to eight colleges. Located on the Fort Lauderdale/Davie Campus, it occupies a \$70-million complex, covering 21 acres. HPD includes eight buildings totaling more than 900,000 square feet of space for classrooms, laboratories, offices, the Martin and Gail Press Health Professions Division Library, an outpatient health center, and a pharmaceutical care center. Several of the HPD programs are also located at our regional campuses, extending our programs and resources to various communities. They offer you the ability to complete a degree at a location that may be more convenient to your home.



NOTEWORTHY RECOGNITIONS



- **Forbes** magazine ranked NSU as one of **America's Top Colleges in 2019**. *Forbes* favors variables like low student debt, alumni salary, graduation rate, and student satisfaction. NSU ranked in the top 15 percent of 4,300 institutes of higher education.
- **U.S. News & World Report** ranked NSU as one of the top performers in social mobility for 2020.
- According to the National Center for Educational Statistics Integrated Postsecondary Education Data System (IPEDS), in terms of all national, four-year, private, nonprofit institutions, NSU ranks
 - ♦ first in doctoral degrees awarded to all minorities
 - ♦ first in doctoral degrees awarded to Hispanic students
 - ♦ second in doctoral degrees awarded to black or African American students
- **U.S. News & World Report** listed several of NSU's programs among their top 100 graduate schools in the country. Two programs from the Shepard Broad College of Law—health law and legal writing—ranked among the best for 2020, along with three NSU HPD programs—audiology, occupational therapy, and pharmacy.

RECOGNITIONS

The infographic is a blue-themed graphic divided into several sections. At the top left, it features the Nova Southeastern University logo (NSU Florida) and a white silhouette of the state of Florida. To the right of the map, it states '\$5-BILLION+ ECONOMIC IMPACT FOR FLORIDA BY 2025'. Below the map, it says '1 OF ONLY 9 U.S. UNIVERSITIES THAT "COULD CHALLENGE THE ELITE" BY 2030'. The middle section is split into two columns: the left column says 'CLASSIFIED AS A UNIVERSITY WITH "HIGH RESEARCH ACTIVITY" BY THE CARNEGIE FOUNDATION FOR THE ADVANCEMENT OF TEACHING' next to a microscope icon; the right column says '150+ ACADEMIC PROGRAMS' with a graduation cap icon and a list of degree types: Bachelor's, Master's, Specialist, Doctoral, Professional, and Certificate. The bottom section is also split: the left side says '1 OF ONLY 50 UNIVERSITIES NATIONWIDE TO ALSO BE AWARDED CARNEGIE'S COMMUNITY ENGAGEMENT CLASSIFICATION'; the right side says '2ND LARGEST, PRIVATE, NONPROFIT UNIVERSITY IN THE SOUTHEAST'. At the very bottom, it says '235 FUNDED RESEARCH PROJECTS AT NSU ADDRESSING' followed by a list of research areas: Autism Spectrum Disorders, Cancer Therapies, Cardiovascular Disease, Chronic Fatigue Syndrome, Coral Reef Preservation, Opioid and Substance Abuse, and 'AND MUCH MORE'. A white curved shape is visible at the bottom right corner of the infographic.

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ECONOMIC
IMPACT FOR
FLORIDA
BY 2025

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"COULD CHALLENGE THE ELITE" BY 2030

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150+
ACADEMIC
PROGRAMS

- BACHELOR'S
- MASTER'S
- SPECIALIST
- DOCTORAL
- PROFESSIONAL
- CERTIFICATE

1 OF ONLY 50
UNIVERSITIES NATIONWIDE
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CLASSIFICATION

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IN THE SOUTHEAST

235 FUNDED RESEARCH PROJECTS
AT NSU ADDRESSING

- AUTISM SPECTRUM DISORDERS
- CANCER THERAPIES
- CARDIOVASCULAR DISEASE
- CHRONIC FATIGUE SYNDROME
- CORAL REEF PRESERVATION
- OPIOID AND SUBSTANCE ABUSE
- AND MUCH MORE

Nova Southeastern University—synonymous with dynamic innovation and intellectual challenge—is the second-largest, private, nonprofit university in the Southeast. Situated on a beautiful, 314-acre campus in Fort Lauderdale, Florida, the university is experiencing a sustained period of academic growth, fiscal strength, and commitment to the challenges of the 21st century. In this environment of expansion and stability, the university is capitalizing on its strengths in such areas as academic innovation, comprehensive clinical training, and flexible educational delivery systems.

The university awards certificates and bachelor's, master's, educational specialist, and doctoral degrees, all in a wide range of fields, including the health professions, law, business, marine sciences, psychology, social sciences, computer and information sciences, and education.

For more information, please visit nova.edu.

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NSU

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Dr. Pallavi Patel College
of Health Care Sciences
**NOVA SOUTHEASTERN
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Master of Science in Anesthesia Anesthesiologist Assistant Program

BROWSE



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Course List

Semester 1

August - December (19 credits)

[- collapse all](#)

ANE 501 - Foundations in Clinical Science (6.5 credits)



Course Description:

Foundations in Clinical Science incorporates all the relevant anatomy, physiology and pharmacology concepts required for more advanced coursework in applied anesthesia.

Coursework includes a thorough review of cellular and organ system physiology, introduction to pharmacology (-kinetics, -dynamics, -genomics, and signal transduction), and anatomy of the upper respiratory tract.

Summary:

This coursework covers normal human anatomy and physiology pertinent to anesthesia practice as well as basic knowledge of pharmacology.

ANE 502 - Foundations in Clinical Practice (1.5 credits)



Course Description:

Foundations in Clinical Practice provides students with an overview of healthcare system elements necessary for the treatment of patients and the conduct of anesthesia care. Topics include patient and provider safety, common laboratory and diagnostic studies in healthcare, medical documentation, and infection control issues.

Summary:

Here, students are introduced to the healthcare environment through lectures and lab exercises. The course is designed to familiarize students with common care practices in anesthesia and healthcare.

ANE 503 - Foundations in Anesthesia (1.5 credits)



Course Description:

Foundations in Anesthesia provides the learner with an introduction to anesthesia concepts. Beginning with an overview of the physiology of pain and the response to surgical stress, the course informs on the various anesthesia techniques employed to anesthetize the surgical patient. Therapeutic targets are discussed along with the practical aspects of intravenous fluid therapy and blood transfusions.

Summary:

Now information becomes more specific to anesthesia. Students will learn basic practices and principles in anesthesia care including foundations in general anesthesia, regional anesthesia, monitored anesthesia care, volume management, and pharmacology.

ANE 511 - Physics and Delivery Systems for Anesthesia (3 credits)



Course Description:

Physics and Delivery Systems for Anesthesia reviews relevant physical principles involved in the delivery of anesthesia and in the care of surgical patient. Additionally, this course instructs on the mechanical, electrical, and pneumatic components of anesthesia monitoring and delivery systems. Applications to practice such as pre-use safety checks are included.

Summary:

Physics and Delivery systems covers relevant physical principles applied in both physiology and anesthesia technology. On top of that, the anesthesia machine and ventilators are discussed in depth as well as an introduction to patient monitors. Coursework is combined between lectures, laboratory, and small group sessions.

ANE 521 - Patient Assessment I: Approach to the Healthy Patient (1 credit)



Course Description:

Patient Assessment I prepares the student to perform a preoperative interview including a focused preoperative medical history and physical exam. Students will practice interviewing skills and performing cardiac, pulmonary, and airway exams. Application of findings and appropriate use of expert consultants are discussed. Since this course draws heavily upon foundational anatomy and physiology knowledge,

satisfactory participation of ANE 501 is required.

Summary:

Students will learn the how to conduct a proper and thorough preoperative exam as they would perform in the hospital. Using both lectures and patient actors for knowledge and skill training, students will be prepared to interview and examine their patients.

ANE 531 - Planning and Preparation I :Approach to the Healthy Patient (2.5 credits)



Course Description:

Planning and Preparation I is designed to prepare students for care of the healthy surgical patient while focusing on the knowledge and skills necessary to formulate, organize, prepare, and implement an anesthetic plan. An emphasis is placed on anesthesia mechanical ventilators and basic, non-invasive monitoring modalities which comply with the *American Society of Anesthesiologists STANDARDS FOR BASIC ANESTHETIC MONITORING*.

Summary:

Patient monitoring technology is a main focus in this course while also including preparation of drugs, airway devices, and other tools needed to be fully prepared to manage an average anesthetic.

ANE 541 - Implementation and Management I: General Anesthesia and Sedation (1.5 credits)



Course Description:

Implementation and Management I is designed to develop anesthesia knowledge sufficient to adequately perform a basic, yet complete anesthetic on a healthy patient for non-complicated surgical procedures of limited invasiveness. Course material is

designed to integrate with a student's existing understanding of physiology, patient assessment, and physiologic monitoring. Anesthesia pharmacology, practical skills, detection and management of common intraoperative pathological conditions, and postoperative complications are included.

Summary:

Students learn the sequence and practice of anesthetic events common to non-complicated surgical procedures. Patient assessment, pharmacology, and perioperative management specific to a basic anesthetic will be integrated into the lecture topics.

ANE 551 - Anesthesia Simulation I: The General Anesthetic and MAC (1 credit)



Course Description:

In Anesthesia Simulation 1, learners will develop and apply real-time monitoring and decision-making skills necessary for supervised clinical education. The learner will apply foundational concepts in practice using high-fidelity simulation, task trainers, and intraoperative equipment. Airway skills, intraoperative diagnostic laboratory analysis, and physiologic monitoring will be incorporated into the course activities to create a foundational knowledge of monitored anesthesia care and general anesthesia.

Summary:

This hands-on course is designed to develop skills and apply concepts learned in concurrent lecture series. In a simulated OR setting and in small group exercises, students will learn foundational skills and knowledge of performing a basic anesthetic.

ANE 561 - Professionalism I: Introduction to Professional Behavior, Medical Ethics, and Value-based Care (0.5 credits)



Course Description:

Professionalism I prepares the student for participation in supervised clinical education

by providing a foundation in the ethical, legal, cultural, and professional issues involved in modern anesthesia care.

Summary:

The first Professionalism course instills ideas of proper behavior and integrity in the anesthesia profession to ensure students are ready to begin clinical training.

Semester 2

January - June (23 credits)

+ expand all

ANE 522 - Patient Assessment II: Approach to the Patient with Comorbidities (2 credits)



ANE 532 - Planning and Preparation II: Approach to the Patient with Comorbidities (2 credits)



ANE 542 - Implementation and Management II: Care for the Complex Patient undergoing Surgical Care (10 credits)



ANE 552 - Anesthesia Simulation II: Managing the Patient with Comorbidities (2 credits)



ANE 562: Professionalism II: Organizations and Evidence-Based Practice (0.5 credits)



ANE 571 - Clinical Anesthesia I (approx. 400 hours) (6.5 credits)



Semester 3

July - December (15.5 credits)

+ expand all

ANE 581 - Subspecialty Practice: Introduction to Patient Assessment and Planning for Special Populations (3 credits)



ANE 553 - Anesthesia Simulation III: Advanced Techniques and Crisis Management (1.5 credits)



ANE 563 - Professionalism III: Practice Management, Professional Issues, and Compensation (1.5 credits)



ANE 572 - Clinical Anesthesia II (approx. 400 hours) (9.5 credits)



Semester 4-5

January - December (42.5 credits)

+ expand all

ANE 661 - Professionalism IV: Quality Improvement in Anesthesia (1 credit)



ANE 671 - Clinical Anesthesia III (approx. 940 hours) (23 credits)



ANE 672 - Clinical Anesthesia IV (approx. 760 hours) (16.5 credits)



ANE 681 - Seminar in Reflective Practice (1 credit)



ANE 682 - Seminar in Reflective Practice (1 credit)



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Master of Science in Anesthesia Anesthesiologist Assistant Program

BROWSE



< **HOW WE LEARN**

Clinical Learning

Clinical Site Listing

Students receive exceptional clinical training in a variety of settings, both on the Froedtert and MCW Campus, as well as the local and state-wide communities. The majority of clinical rotations occur in the greater Milwaukee area. Some travel is required to affiliated practices around the state of Wisconsin, as well as out-of-state clinical partners. As the program continues to grow, we are continually seeking to identify new clinical rotation sites. Current clinical affiliates are listed below.

- [St. Agnes Hospital](#)
- [ThedaCare Regional Medical Center Appleton](#)
- [ThedaCare Regional Medical Center Neenah](#)
- [Methodist Hospitals](#)
- [Columbia St. Mary's](#)
- [Nicklaus Children's Hospital](#)
- [Children's National Health System](#)
- [Froedtert Hospital](#)

- [Froedtert Menomonee Falls Hospital](#)
- [Children's Wisconsin](#)
- [Clement J. Zablocki VA Medical Center](#)
- [Aurora Sinai Medical Center](#)
- [Aurora Grafton Medical Center](#)
- [Gundersen Lutheran](#)
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MASTER OF MEDICAL SCIENCE PROGRAM
IN ANESTHESIOLOGY

Student Handbook

Master of Medical Science Program
Department of Anesthesiology
Emory University School of Medicine
57 Executive Park South, Suite 300
Atlanta, Georgia

PHONE 404 727 5910 FAX 404 727 3021

www.emoryaaprogram.org

August 2020

TABLE OF CONTENTS

| | |
|--|--------|
| STUDENT HANDBOOK | - 8 - |
| SPECIAL SECTION | - 9 - |
| COVID-19, CORONAVIRUS PANDEMIC, AND IMPACT ON EDUCATION | |
| EMORY UNIVERSITY | - 12 - |
| Equal Opportunity | - 12 - |
| Affirmative Action | - 12 - |
| ANESTHESIOLOGY PROGRAM | - 13 - |
| Facilities | - 13 - |
| Organization | - 14 - |
| Accreditation | - 14 - |
| Expectations for Professional Conduct | - 14 - |
| ALCOHOL AND OTHER DRUGS POLICY | - 17 - |
| APPLICATION FOR DEGREE | - 18 - |
| ATTENDANCE, OPERATIONAL TIME, AND ABSENCES | - 19 - |
| Operational Time and Activities | - 19 - |
| Attendance | - 19 - |
| Clinical Attendance | - 19 - |
| Holidays and Breaks | - 19 - |
| Senior Students (Semesters 5-7) | - 19 - |
| Absences and Requests to be Absent | - 19 - |
| Personal Leave | - 20 - |
| Minor Illness or Minor Unforeseen Circumstance | - 20 - |
| Major Illness or Major Unforeseen Circumstance | - 20 - |
| Medical Leave | - 20 - |
| Professional Leave | - 20 - |
| Jury Service | - 20 - |
| Bereavement | - 21 - |
| Mission Trips, Service Projects, and Associated Travel | - 21 - |
| Violations of Policy | - 22 - |
| Timekeeping System | - 22 - |
| CALENDAR FOR ANESTHESIOLOGY PROGRAM | - 23 - |
| CAMPUS LIFE AT EMORY UNIVERSITY | - 24 - |
| CASES AND CASE RECORDS | - 25 - |
| Electronic Anesthesia Case Records | - 26 - |
| Forfeit Hours | - 27 - |

| | |
|---|--------|
| CERTIFICATION IN THE UNITED STATES | - 28 - |
| CLASS OFFICERS AND REPRESENTATIVES | - 29 - |
| CLINICAL ANESTHESIA WORKBOOK | - 30 - |
| Clinical Task Progression | - 30 - |
| CLINICAL HOURS | - 31 - |
| First Year | - 31 - |
| Second Year | - 31 - |
| CLINICAL EVALUATION | - 32 - |
| CLINICAL ROTATIONS | - 33 - |
| First-year Clinical Activity | - 33 - |
| Senior Clinical Rotations | - 33 - |
| Daily Clinical Activity | - 33 - |
| Daily Case Assignments | - 33 - |
| Initial Daily Activities | - 34 - |
| Clinical Time | - 34 - |
| Remedial Clinical Work | - 34 - |
| CLINICAL SITES | - 36 - |
| COMMITTEES | - 37 - |
| CONDUCT | - 38 - |
| Misconduct – COVID-19 | - 38 - |
| Misconduct – Clinical | - 38 - |
| Misconduct – Nonclinical | - 39 - |
| Monitoring and Reporting | - 40 - |
| Process for Conduct Matters | - 40 - |
| Actions for Misconduct | - 41 - |
| Continuation | - 41 - |
| Continuation with Warning | - 41 - |
| Continuation with Penalty | - 41 - |
| Probation | - 41 - |
| Extension of Time in the Degree Program | - 41 - |
| Dismissal | - 41 - |
| Appeals for Misconduct | - 41 - |
| Record of Misconduct | - 41 - |
| Social Misconduct | - 42 - |
| Sexual Misconduct | - 42 - |
| Discriminatory Harassment | - 42 - |

| | |
|--|------------|
| CONTINUATION, INTERRUPTION, TERMINATION OF THE MMSc DEGREE PROGRAM | - 43 - |
| Continuation | - 43 - |
| Continuation Requirements | - 43 - |
| Advancement | - 43 - |
| Academic Penalties | - 43 - |
| Academic Warning | - 43 - |
| Academic Probation | - 43 - |
| Dismissal | - 44 - |
| First Year: Leave of Absence for Academic Reasons | - 44 - |
| Financial Aid Implications | - 45 - |
| Senior Year: Probation and Extension of the Educational Program | - 45 - |
| Academic Appeals | - 45 - |
| Interruption of Degree Program | - 45 - |
| Medical Leave | - 45 - |
| Leave of Absence | - 46 - |
| Termination Prior to Completion of Degree | - 46 - |
| Cancellation | - 46 - |
| Withdrawal | - 46 - |
| Dismissal | - 46 - |
| Involuntary Withdrawal from Emory University | - 47 - |
| COUNSELING RESOURCES | - 48 - |
| Academic Counseling | - 48 - |
| University Counseling Services | - 48 - |
| CURRICULUM | - 49 - |
| Required Anesthesiology Courses | - 49 - |
| Elective Anesthesiology Courses | - 52 - |
| Required Basic Science Courses | - 52 - |
| Credit in Transfer | - 52 - |
| DRESS CODE | - 54 - |
| Standards of Dress and Appearance | - 54 - |
| Guidelines for Dress and Appearance | - 54 - |
| EMPLOYMENT DURING THE PROGRAM | - 56 - |
| EQUIPMENT AND CLOTHING REQUIRED | - 57 - |
| EVALUATIONS BY STUDENTS | - 58 - |
| Courses and Instructors | - 58 - |
| Clinical Rotations and Instructors | - 58 - |
| EXAMINATIONS | - 59 - |
| Course Examinations | - 59 - |
| Comprehensive Examinations | - 60 - |
| First-semester Math and Pharmacology Comprehensive Examinations | - 60 - |

| | |
|--|------------|
| First-year Comprehensive Examinations | - 61 - |
| Senior-year General Comprehensive Examinations | - 61 - |
| Senior-year Specialty Comprehensive Examinations | - 61 - |
| Comprehensive Examinations for Students in an Extended Degree Program | - 61 - |
| FACULTY AND STAFF | - 62 - |
| FINANCIAL AID | - 63 - |
| GRADING AND REPORTING | - 64 - |
| Lecture Course Grades | - 64 - |
| Laboratory and Simulation Course Grades | - 64 - |
| Conference Course Grades | - 64 - |
| Seminar Course Grades | - 64 - |
| Clinical Course Grades | - 64 - |
| Clinical Evaluations | - 65 - |
| Clinical Attendance | - 65 - |
| Reconciliation of Assignments, Attendance, and Evaluation Data | - 65 - |
| Key Clinical Evaluations | - 65 - |
| Comprehensive Examinations | - 65 - |
| Clinical Scores – Daily Evaluations | - 66 - |
| Clinical Grades in the First Year | - 66 - |
| Clinical Grades in the Senior Year | - 66 - |
| Assignment of Clinical Grades | - 66 - |
| GRADING | - 67 - |
| Grade Scale | - 67 - |
| Grade Reporting | - 67 - |
| Transcripts | - 67 - |
| GRADUATION REQUIREMENTS | - 68 - |
| HEALTH REQUIREMENTS | - 69 - |
| Policies of the School of Medicine | - 69 - |
| History and Physical Examination | - 69 - |
| Immunizations | - 69 - |
| Communicable Diseases and Infection Control | - 69 - |
| Colds, Flu, Gastroenteritis | - 70 - |
| Tuberculosis | - 71 - |
| PPD Testing | - 71 - |
| PPD Conversion | - 71 - |
| Guidelines for Students Infected with HIV, Hepatitis B, or Hepatitis C | - 71 - |
| HEALTH AND MENTAL HEALTH SERVICES | - 72 - |
| Emory University Student Health Service | - 72 - |
| Mental Health Services | - 72 - |

| | |
|---|--------|
| HONORS AND AWARDS | - 73 - |
| HOUSING | - 74 - |
| IDENTIFICATION | - 75 - |
| INSURANCE | - 76 - |
| Disability Insurance | - 76 - |
| Health Insurance | - 76 - |
| Liability Insurance | - 76 - |
| LETTERS OF RECOMMENDATION | - 77 - |
| MEETINGS | - 78 - |
| PHOTOGRAPHY & RECORDING | - 79 - |
| PRACTICE OF ANESTHESIA | - 80 - |
| Personal Risks Associated with the Practice of Anesthesia | - 80 - |
| Exposure to Pathogens | - 80 - |
| Substance Abuse | - 80 - |
| Exposures During Pregnancy | - 80 - |
| Technical Standards | - 81 - |
| PROFESSIONAL ORGANIZATIONS | - 82 - |
| RULES, REGULATIONS, AND POLICIES OF EMORY UNIVERSITY AND EMORY UNIVERSITY'S SCHOOL OF MEDICINE | - 83 - |
| SENIOR FRIDAY & ASSOCIATED TRAVEL | - 84 - |
| SIMULATION | - 85 - |
| SOCIAL MEDIA | - 86 - |
| STUDENT RECORDS AND FILES | - 87 - |
| TRAVEL & LODGING | - 88 - |
| TUITION AND FEES | - 89 - |
| Mandatory Confirmation of Payment | - 89 - |
| WEATHER | - 90 - |
| Emory University and the Metro Atlanta Area | - 90 - |
| Clinical Rotations Outside the Metropolitan Atlanta Area | - 90 - |

FORMS - 91 -

- Consent for Release and Exchange of Educational Records - 92 -
- Consent for Release of Medical Information - 93 -
- Acknowledgment of Continuous Health Insurance Coverage - 94 -
- Statement Concerning NCCAA Certifying Examination - 95 -
- HIPAA Confidentiality Statement - 96 -
- Confidentiality Related to Patients and Healthcare Facilities - 97 -
- Student Information - 98 -
- Consent for Photography and Recording - 99 -
- Authorization for Drug Testing and Release of Drug Test Results - 100 -
- Release and Waiver of Liability: Venous Vascular Access Lab - 101 -
- Consent for Release of Contact Information - 102 -

INSTRUCTIONS - 103 -

STUDENT HANDBOOK

The Student Handbook for the Master of Medical Science Program in Anesthesiology (hereinafter Anesthesiology Program) provides information, rules, regulations, and policies of the Program and the Department of Anesthesiology – in accordance with the policies, rules, and regulations of Emory University School of Medicine and Emory University. A copy of this Student Handbook is provided to each matriculant during orientation. Each student is responsible for reading, understanding, and complying with all rules, regulations, and policies stated in this Handbook.

A revised copy of this Handbook is provided to each student annually. Addendums to the Handbook may be published as necessary. Current information pertaining to communications with faculty, staff, students, and clinical sites is available in the Program Office. A student directory, including a list of current class officers, is distributed separately by the Program Office.

Issues not covered specifically in this Handbook will be dealt with by the Program Directors in consultation with appropriate individuals, as needed.

Emory University, Emory University School of Medicine, the Department of Anesthesiology, and the Anesthesiology Program reserve the right to revise information, requirements, policies, rules, regulations, and financial charges at any time. Whenever changes occur, every effort will be made to notify students who may be affected.

SPECIAL SECTION

COVID-19, CORONAVIRUS PANDEMIC, AND IMPACT ON EDUCATION

The coronavirus pandemic that began in the US in winter 2020 has had a significant impact upon the educational activities of the Anesthesiology Program and will continue to do so into academic year 2020-2021. Formats for lectures, seminars, labs, human patient simulation (HPS), and clinical rotations have all been affected. It is not possible to predict when the effects of the pandemic will abate nor when we will be able to return to more normal means of providing classroom and clinical education. Our efforts are being directed toward employing whatever tools are necessary to continue providing the excellent anesthesia education that has always been a hallmark of the Program.

This edition of the Student Handbook differs from previous editions in that it includes information related to Program operations that have been modified due to the coronavirus pandemic. Because the effects of the pandemic are dynamic, the Anesthesiology Program will provide links to resources which will be updated as new information, guidelines, and policies emerge. Addenda to the Student Handbook may be required in the event of major changes in Program operations.

The foremost consideration of the Anesthesiology Program is the well-being of students, staff, and faculty. In that regard, it is expected that students, staff, and faculty will access the provided resources on a regular basis and adhere to the guidelines and policies established by the Program, the School of Medicine, and Emory University. These resources utilize the guidelines, recommendations, and data provided by the CDC and the Georgia Department of Public Health. Students are encouraged to access these resources for up-to-date information.

Because students and faculty are in clinical environments on a regular basis, it is extremely important that everyone involved in the Anesthesiology Program keep up to date and adhere to current guidelines.

The following formats for educational activities will be employed in Fall Semester 2020, and, unless otherwise altered, will continue into Spring Semester 2021 and beyond.

Remote Activities

Remote activities include lectures, seminars, small discussion groups, lab pre-briefs, and review sessions following exams. The principal tool for remote activities is Zoom. The date, time, ID, and password for each activity will be posted on the Program's Google calendar

In-person Activities

In-person activities include human patient simulation, labs, workshops, and objective structured clinical examinations (OSCEs). The date, time, and location for each scheduled in-person activity will be posted on the Program's Google calendar.

Clinical Rotations

FY Semester 1. Clinical activity for the first semester for first-year students is primarily an observational activity with limited opportunities for hands-on participation. The date, time, and location for each scheduled clinical activity will be posted on the Program's Google calendar.

FY Semesters 2-3-4. Clinical activity for the 2nd, 3rd, and 4th semesters for first-year students will be scheduled at clinical rotation sites throughout metro Atlanta. Dates and location for each scheduled clinical activity will be posted in the Program's scheduling app.

SR Semester 5-6-7 Clinical rotations for senior students will be scheduled at clinical rotation sites throughout the United States. Dates and location for each rotation will be posted in the Program's scheduling app.

Because the effects of the pandemic are so fluid, surgical case loads can vary greatly within states, within cities, and even at different locations within healthcare systems. Due to this on-going variability, student participation at a given site may be decreased or may cease altogether for a period of time. When cessation of rotations occurs (as happened in spring-summer 2020), the Program will attempt to continue to provide clinical experience for all students, but that may not be possible under extenuating circumstances. If there is an extended disruption of clinical rotations, the Program will attempt to re-schedule all students in an equitable manner. However, extension of the first year and/or delay in graduation may occur if clinical rotations cease for a prolonged period.

Reporting a known or suspected coronavirus exposure

The Anesthesiology Program utilizes a coronavirus exposure reporting system in order to clearly document students' exposures; optimize clinical scheduling; and award clinical hours credit for all assigned clinical days that are missed due to mandatory isolation.

This system uses a single email address, covidalerts@emoryaaprogram.org, that distributes the information to faculty and staff who need it. Students should use only this email address. Students should NOT send emails about exposure to individual faculty or staff.

If you have a known or suspected coronavirus exposure, you must do two things:

- ✉ Contact the Covid Assessment Provider via the Student Health Service portal.
- ✉ Send an email to the Program: covidalerts@emoryaaprogram.org

In the initial and, if needed, subsequent emails, you will need to provide the following information:

- Date of known or suspected exposure
- Source of exposure
Examples include clinical rotation, family, roommate, community, friend, activity at Executive Park
- Exposure information
Examples include exposure to a known COVID-positive person, exposure to a person under investigation (PUI), exposure to a person with symptoms; or you developed symptoms without a known exposure
- The date of onset of your symptoms or that you have no symptoms after a coronavirus exposure
- The date you contacted Student Health Service

- The date of your PCR test or that a test was not required by Student Health Service
- PCR test results
 - Positive or negative or that a test was not required by Student Health Service
- The date that Student Health Service said you could return to clinical
- List each date (mm/dd) that you missed assigned clinical due to mandatory isolation

Assessment, testing, and guidance

The School of Medicine in concert with Emory's Student Health Service provides assessment, testing, and guidance for students with known or suspected coronavirus exposure. The Student Health Service performs contact tracing.

It is imperative that any student with a known or suspected coronavirus exposure contact the Covid Assessment Provider via the Student Health Service portal. Failure to participate in the reporting systems of the Anesthesiology Program and the School of Medicine/Student Health Service is misconduct and may result in suspension from the Program and possibly dismissal from the University.

EMORY UNIVERSITY

Equal Opportunity

Emory University does not discriminate in admissions, educational programs, or employment on the basis of race, ethnicity, color, religion, sex, sexual orientation, national origin, age, disability, or Veteran/Reserve/National Guard status and prohibits such discrimination by its students, faculty, and staff. Students, faculty, and staff are assured of participation in University programs and in use of facilities without discrimination. The University complies with all applicable federal and Georgia statutes and regulations prohibiting unlawful discrimination. Inquiries regarding this policy should be directed to the Office of Equity and Inclusion (<http://equityandinclusion.emory.edu/>).

Affirmative Action

Emory University has an approved Affirmative Action Plan and complies with Executive Order 11246, as amended, Section 503 of the Rehabilitation Act of 1973, the Vietnam Era Veteran's Readjustment Assistance Act, and applicable regulations thereunder. Inquiries regarding this policy should be directed to the Office of Equity and Inclusion (<http://equityandinclusion.emory.edu/>).

ANESTHESIOLOGY PROGRAM

The Master of Medical Science Program in Anesthesiology accepts qualified individuals into a seven-semester clinical masters-degree program and provides direction, motivation, and didactic and clinical opportunities to enable the students to become knowledgeable, skilled, safe anesthetists with sound clinical judgement. In addition, the Anesthesiology Program imbues professionalism, including commitment to patients and the community, and inculcates a life-long desire for learning.

The Program's obligation to the public, to employers, and to the profession is such that awarding a Master of Medical Science Degree indicates that the Anesthesiology Program's faculty agree that the student has attained proficiency in the delivery of anesthesia and has exhibited good ethical and moral behavior.

Students with poor performance in academics, clinical, or conduct will be counseled and will be carefully monitored by Program faculty for suitability to continue in the Program. Students must meet the academic standards of the Anesthesiology Program and Emory University in order to continue in the Anesthesiology Program. Students who are performing well in the classroom but are having difficulty with clinical assignments may be required to perform remedial clinical work in order to continue in the Program. Students who are performing well in the classroom and with clinical assignments but exhibit poor conduct will not be permitted to continue in the Program. Students must perform satisfactorily in all three areas in order to graduate from the Program. Deficiencies in any area must be resolved in order to continue in the Program.

The Program has an obligation to students to provide high quality learning experiences in the classroom and in the clinical environment. The Program is continually reevaluating the methods and people responsible for teaching, and students are encouraged to provide feedback on their educational experience. The Program expects that students will take the initiative and assume responsibility for optimizing their own educational experience and will avail themselves of the opportunities that exist in the University, the School of Medicine, the Department of Anesthesiology, the Program, and the clinical sites.

The Program has an obligation to the faculty to provide the most qualified students through a fair and impartial admissions process and to provide the facilities, instructional equipment, and other resources necessary to support the teaching process.

Facilities

The Anesthesiology Program is located at Executive Park in Suite 300 of Building 57. The Anesthesiology Program Office includes faculty and staff offices, classrooms, library, learning resources center, human patient simulation center, and other facilities. An Anesthesiology Library is available in the Program Office. Medical libraries are available on the main Emory campus and in many of the hospitals at which students rotate.

Organization

Two Program Directors are jointly responsible for the organization and overall operation of the Program. The Academic Program Director and the Clinical Program Director work closely to integrate and manage all Program activities. Human patient simulation and other labs are under the direction of the HPS & Laboratory Director. Clinical site relations and clinical rotations are under the auspices of the Clinical Rotation Director.

The Assistant Program Director is responsible for day-to-day operations and is the principle contact for students' registration, scheduling, and grade reporting. Other staff members include Director of Admissions; Technology Support Coordinator, who manages evaluation, testing, and technology; Contracts Specialist; Clinical Site Credentialing Specialist; Administrative Assistant; and Simulation Technologist/Laboratory Manager.

Accreditation

Anesthesiologist assistants were officially recognized by the American Medical Association [AMA] as a new emerging health occupation in 1985. The AMA through its Committee on Allied Health Education and Accreditation [CAHEA] approved the Education Essentials for Anesthesiologist Assistant Educational Programs, which provides the basis for establishing and reviewing educational programs for anesthesiologist assistants. The Commission on Accreditation of Allied Health Educational Programs [CAAHEP] became CAHEA's legal successor in 1994. Information on accreditation can be obtained on CAAHEP's web site, www.caahep.org.

Emory's Master of Medical Science Program was initially accredited in 1988 and has been re-accredited in 1994, 2002, 2007, and 2012.

Expectations for Professional Conduct

Emory University is an institution dedicated to providing educational opportunities for its students, transmitting and advancing knowledge, and providing a wide range of services to students and to the general community. To accomplish these objectives and responsibilities requires that the University be free from violence, threats, and intimidation; protective of free inquiry and dissent; respectful of the rights of others; open to change; supportive of democratic and lawful procedure; and dedicated to intellectual integrity and a rational approach to the resolution of human problems.

The tradition of the university as a sanctuary of academic freedom and center of informed discussion is an honored one, to be guarded vigilantly. The basic significance of that sanctuary lies in the protection of intellectual freedoms – the rights of professors to teach; of scholars to engage in the advancement of knowledge; of students to learn and express their views.

Health professionals are privileged to serve in important and time-honored roles as caregivers for other humans. These roles include physical and emotional dimensions that demand the highest degree of ethical behavior. Ethical behavior includes but is not limited to honesty, maintaining confidentiality, trustworthiness, professional demeanor, respect for the rights of others, personal accountability, concern for the welfare of patients, and responsibility to duty.

- ❑ Honesty – Being truthful in communication with all others while in the healthcare arena or in the community at large.
- ❑ Maintenance of patient confidentiality – Restricting discussion of patient care to those areas where conversations cannot be overheard by others outside of the care team; refraining from disclosing patient identity to those not connected to the care of the patient; maintaining appropriate security for all paper and electronic patient records, whether in the patient care or research realms.
- ❑ Trustworthiness – Being dependable; following through on responsibilities in a timely manner.
- ❑ Professional communication and demeanor – Being thoughtful and kind when interacting with patients, their families, other members of the healthcare team, and all others; maintaining civility in all relationships; striving to maintain composure under pressures of fatigue, professional stress or personal problems; maintaining a neat and clean appearance and dress in attire that is reasonable and accepted as professional to the circumstances; refraining from intoxication; abstaining from the illegal use of drugs (both prescription and illicit drugs).
- ❑ Respect for the rights of others – Interacting with others, whether in a professional or nonprofessional setting, in a considerate manner and with a spirit of cooperation; respecting the rights of patients and their families to be informed and share in patient care decisions; respecting every patient’s modesty and privacy.
- ❑ Personal accountability – Participating responsibly in patient care to the best of one’s ability and with appropriate supervision; undertaking clinical duties and persevering until they are complete; notifying the responsible person if one is unable to perform clinical tasks effectively; complying with University policies and procedures in an honest and forthright manner.
- ❑ Concern for the welfare of patients – Treating patients and their families with respect and dignity both in their presence and in discussions with others; avoiding the use of foul language, offensive gestures, and inappropriate remarks; discerning accurately when supervision or advice is needed and seeking these out before acting; recognizing when one’s ability to function is compromised and asking for relief or help; never administering care, in person or over the phone, while under the influence of alcohol or other drugs (prescription or illegal); not engaging in romantic, sexual, or other nonprofessional relationships with a patient, even upon the apparent request of a patient; advocating for the best care of the patient, in the context of that patient’s beliefs and desires.
- ❑ Responsibility to duty – Undertaking duties with alacrity, eagerness, enthusiasm, and promptness; persevering until complete; notifying a responsible, more senior person when a problem arises; being punctual for clinical assignments, lectures, group discussions, rounds, conferences, and other duties; providing timely notification to supervisory faculty, staff, and preceptors of absences or of an inability to carry out assigned duties; seeing patients regularly and assuming responsibility for their care with appropriate supervision; identifying

emergencies and responding appropriately; and being available to faculty or staff personnel when on duty.

ALCOHOL AND OTHER DRUGS POLICY

Federal regulations, including the Drug Free Workplace Act of 1988 and the Drug Free Schools and Communities Act, mandate that Emory maintain an Alcohol and Other Drugs (AOD) Policy and distribute such policy to all students, faculty, and staff.

Emory's policy, along with resources, health risks of alcohol and drug abuse, and consequences of this abuse may be found at http://conduct.emory.edu/_includes/documents/policy8-8.pdf. Members of the campus community are responsible for being fully aware of University policy as well as local, state, and federal laws regarding the use of alcohol and other drugs.

Emory University is committed to the health and well-being of its faculty, staff, and student body. Alcohol and drug misuse and abuse can be detrimental to one's overall physical and emotional health, as well as academic and/or professional work performance.

Resources for Students

If you or someone you know needs assistance for alcohol and/or drug use, Emory sponsors several programs that provide information and professional services for faculty, staff, and students. These programs provide education, consultation, assessment, counseling, and referral in a professional environment that respects individual confidentiality and integrity. Resources, which can be found at <http://www.studenthealth.emory.edu> , include

- Student Health
- Counseling and Psychological Services
- Office of Health Promotion

APPLICATION FOR DEGREE

Each senior student must apply for his/her degree approximately six weeks prior to expected graduation. Information concerning degree application is available in the Program Office.

ATTENDANCE, OPERATIONAL TIME, AND ABSENCES

The rules and information in this section apply from matriculation through the end of the degree program. Violations are subject to penalty and may represent misconduct.

Operational Time and Activities

Operational time for the Anesthesiology Program is from 5:30 AM until 6:00 PM Monday through Friday and for any hours during nights and weekends for clinical assignments. Program activities include, but are not limited to, lectures, small discussion groups, HPS, labs, practica, examinations, quizzes, and clinical assignments.

Attendance

Attendance to and availability for all Program activities during Program operational days are mandatory. If a student must schedule non-program activities during Program operational hours, then he/she must submit a Request to be Absent and receive approval in order for the absence to be valid and not be penalized. The student will be responsible for any Program activities that are missed during the time of absence.

Clinical Attendance

Attendance is required for all clinical assignments. In order to receive credit for clinical attendance, the student must spend a minimum of 4.5 hours in clinical activities during the day, enter all case data into the current clinical tracking system, and receive a daily evaluation by the assigned preceptor. Failure to meet these requirements will result in a personal day being assigned to the student. Occurrence of three or more such failures during any semester will result in a conduct review by the Program.

Holidays and Breaks

First-year Students (Semesters 1-4)

Holidays and breaks include Labor Day; Thanksgiving (Thursday and Friday); 4th of July; winter break (December 19 - January 04); MLK Day; Memorial Day; spring break (five days assigned by the Program in April or May); summer break (week of July 4th). Each student has eight (8) personal leave days available.

Senior Students (Semesters 5-7)

Holidays include Labor Day; Thanksgiving (Thursday and Friday); 4th of July; winter break (December 19 - January 04); MLK Day; Memorial Day. Each student has ten (10) personal leave days available plus three (3) study days (Wed/Thu/Fri) preceding the national Certifying Examination for Anesthesiologist Assistants.

Absences and Requests to be Absent

Requests to be absent are managed in an electronic, web-based system that employs the rules listed below for each type of absence. The student will be responsible for all Program activities that are missed during an absence for any reason.

Personal Leave

Personal leave is available for personal reasons, minor illnesses, emergencies, and job interviews (senior year). A request to be absent for personal reasons must be submitted 30 calendar days before the first day that is being requested for absence. Approval should be obtained before making any travel commitments.

Minor Illness or Minor Unforeseen Circumstance

A minor illness or minor unforeseen circumstance occurs when a student must be absent from Program activities for one day due to illness, family emergency, car breakdown, or unexpected job interview. The request to be absent must be submitted as soon as the student realizes that he/she cannot attend clinical or other Program activities but no later than 6:00 AM on the day of absence. The student must notify the clinical site as soon as possible after submitting the request to be absent. Days of absence for minor illnesses or minor unforeseen circumstances will be subtracted from personal leave days. Failure to submit a request or to notify the clinical site on a clinical assignment day is a violation of policy (see below).

Major Illness or Major Unforeseen Circumstance

A major illness or major unforeseen circumstance occurs when a student must be absent from Program activities for two or more consecutive days for illness or family emergency. This request to be absent must be submitted as soon as the student realizes that he/she cannot attend clinical or other Program activities but no later than 6:00 AM on the first day of absence. The student must notify the clinical site as soon as possible after submitting the request to be absent. Days of absence due to major illness may or may not be subtracted from personal leave days. The reason for absence must be documented in a communication to the Program from the student's physician within three days of return to Program activities. Subtraction of days of absence for major illness from personal leave days is solely at the discretion of Program Directors. Failure to submit a request or to notify the clinical site on a clinical assignment day is a violation of policy (see below).

Medical Leave

See Medical Leave in the section Interruption in Degree Program.

Professional Leave

Each student has three days available during the first four semesters and three days available during the last three semesters to request leave for attendance at specific professional meetings: AAAA, ASA, GAAA, GSA. A request to be absent for professional leave must be filed and approved for the student to be able to attend a meeting, and documentation of attendance must be submitted to the Program in order for the request to be valid.

Jury Service

In most states, including Georgia, enrollment as a full-time student in an accredited educational program is a valid reason to be excused from jury duty. In the event that a student will not be excused from a jury summons or jury duty, then the student must request to be absent as soon as jury service notification is received. A copy of the communication from the jurisdiction issuing the jury summons must accompany the request to be absent. There will be no grade penalties for a jury duty absence. However, clinical rotation assignments and the 2500-clinical-hour minimum must still be met in order to be eligible for graduation.

Bereavement

Bereavement leave may be granted for attendance at a funeral or comparable service; related travel time; and time necessary to conduct arrangements or other related, necessary business. Absence may be approved for up to five days per occurrence for an immediate family member identified as parent, grandparent, step-parent, legal guardian, parent-in-law, spouse, same-sex domestic partner, child, step-child, grandchild, legal ward, or sibling.

A request to be absent must be submitted as soon as dates for the leave are known. Approval for this leave, including length of time for the absence, is solely at the discretion of Program Directors. The amount of time granted depends on the relationship the individual has with the deceased, the individual's level of responsibility for arrangements, travel time needed, and other relevant circumstances. Should additional time be required in excess of bereavement leave, the student may request personal days.

Mission Trips, Service Projects, and Associated Travel

The Anesthesiology Program encourages students to participate in service activities at home and abroad. However, the Program does not currently have any elective rotations in mission or service or any rotations outside the United States.

The Program will support – within the guidelines below – senior students who wish to ***personally participate*** in mission trips or service projects while they are enrolled in the Anesthesiology Program at Emory University.

No later than 90 days prior to a mission trip or service project, the student must apply for leave for the project by submitting complete information on that project:

- Sponsoring organization
- Sponsoring physician
- Complete name, contact information, and specialty of the physician who will be present during the service or mission project
- Location of the project
- Dates of the project, including travel dates
- The student's role in the project

A student who is ***personally participating*** in a mission trip or service project must be aware of the following limitations:

- Students are NOT covered by Emory's malpractice/liability insurance.
- Students are NOT covered by Emory's travel insurance.
- Emory's needle stick policy will NOT apply. The needle stick hotline may respond to a student regardless of where they are, but Emory will not provide service to students who are serving at a facility with which Emory University does not have a clinical rotation contract.
- The student should confirm that his/her student health insurance or personal health insurance is in effect and will cover injuries/illness sustained during the project and will cover medevac from the location of the mission trip or service project back to an appropriate medical facility in the United States.

- The student will be responsible for making claims through the student health policy or his/her private insurance policy for injury or illness sustained during the mission trip or service project and for medevac.

Any student undertaking a project abroad is encouraged to contact EHC TravelWell to be certain that all vaccinations and other medical preparations are complete well before time for out-of-country travel.

Clinical hours credit for time performing clinical duties on the project may be awarded if the following requirements are met:

- The physician on the project is an Emory faculty member or the physician has been pre-approved by Emory University, which will require the physician submitting a CV.
- Learning objectives are in place prior to the project.
- The physician confirms that the learning objectives were met during the project.

Violations of Policy

Any violation of policies governing absences or requests to be absent will result in a grade penalty. For each violation of policy, two points will be deducted from that semester's clinical grade. Deducted points are cumulative for the duration of the degree program; ie, deducted points carry over from semester to semester.

Example In fall semester, one violation results in two penalty points. The student, who otherwise would have had a clinical grade of 89 (B) now has a clinical grade of 87 (still a B). In spring semester there are no violations, but in summer semester this student has two violations and receives four penalty points. Her summer clinical grade would have been 84 (B) but now is 78 (C); ie, $84 - 4$ [new penalty points] - 2 [existing penalty points].

Serious violations or repeat violations represent misconduct and may result in probation or dismissal from the Anesthesiology Program.

Timekeeping System

The Program uses a timekeeping system to monitor attendance at clinical sites. All students are required to clock in and clock out each day that they have a clinical assignment scheduled. The student must clock in and out from the designated telephone at their assigned clinical site.

Allowing another person to clock in or out of the system for a student or clocking in or out for another student represents misconduct and is grounds for immediate suspension from clinical activity.

If a student neglects to clock in or clock out or uses a phone other than the designated phone at their assigned clinical site, then he/she must submit an Attendance Exception Report within 48 hours. Failure to submit an Attendance Exception Report will result in loss of clinical hours for the day for which the report is missing.

CALENDAR FOR ANESTHESIOLOGY PROGRAM

The current calendar for the Anesthesiology Program is posted on the Program's Google calendar. The calendar is updated as often as needed – sometimes more than once a day. Each student is responsible for keeping up to date with events scheduled on this calendar.

Final exams are scheduled during the final exam week for each semester. Each semester ends at the end of the last day of final exam week.

CAMPUS LIFE AT EMORY UNIVERSITY

Refer to the Campus Life Handbook, available online at www.emory.edu.

CASES AND CASE RECORDS

Based on national data and ARC-AA Standards and Guidelines, the Anesthesiology Program has established requirements for numbers and types of cases and procedures that must be performed during the degree program. These requirements are provided in the following table:

| CASES & PROCEDURES | TOTAL REQUIREMENTS FOR DEGREE |
|-------------------------------------|-------------------------------|
| Total anesthesia cases | 600 |
| Total clinical hours | 2500 |
| Patients ASA Class III or IV | 250 |
| Emergent cases (ASA "E") | 30 |
| Trauma | 5 |
| Ambulatory (out patient) | 200 |
| Geriatric (> 65 years old) | 150 |
| Pediatric (0 - 18 years old) | 50 |
| Surgery by anatomic location | |
| Intra-abdominal | 100 |
| Intracranial | 10 |
| Head and neck | 30 |
| Intrathoracic | |
| Heart | 10 |
| Lungs | 10 |
| Obstetrics | 40 |
| Vascular | 25 |
| Methods of anesthesia | |
| <u>General anesthesia</u> | 450 |
| Mask induction | 35 |
| Mask management | 50 |
| Supraglottic airway device | 75 |
| Endotracheal intubation | |

| | |
|--|-----------|
| Oral | 295 |
| Nasal | 5 |
| Total intravenous anesthesia | 10 |
| Emergence from anesthesia | 300 |
| Regional anesthesia/analgesia | |
| Spinal administration§ | 2 |
| Epidural administration§ | 2 |
| Peripheral nerve block administration§ | 5 |
| Monitored anesthesia care | 50 |
| Procedures | |
| Airway management with FFO scope, videolaryngoscopy, other alternative device | 50 |
| Arterial puncture or catheter placement | 25 |
| Intra-arterial pressure monitoring | 40 |
| CVP catheter placement§ | 5 |
| CVP catheter monitoring | 15 |
| IV catheter placement | 125 |
| Gastric tube placement | 5 |
| EBT or bronchial blocker placement | 5 |
| §At the discretion of Program Directors, a student who has not achieved one or more of these requirements may demonstrate competence via simulation with Program simulation faculty. | |

Students who fail to meet case and procedure requirements will have their degree program extended by a minimum of one semester in order to meet those requirements.

Electronic Anesthesia Case Records

The Anesthesiology Program requires that students enter all patient encounter data into an electronic clinical tracking system. Complete data must be entered for every patient encounter in which the student participates while enrolled in the Anesthesiology Program.

Electronic tracking of patient encounter data closes by calendar date. Complete data must be entered within three (3) days of every patient encounter. After three days, the window for data entry closes.

Forfeit Hours

Failure to maintain current patient encounter data will result in loss of all clinical hours for each and every day for which the student has not entered complete data for all patients encountered. On the monthly and annual clinical hours reports, the lost hours are listed as forfeit hours. Forfeit hours are cumulative in the educational program; ie, forfeit hours carry forward from the first year into the senior year.

CERTIFICATION IN THE UNITED STATES

The National Commission for Certification of Anesthesiologist Assistants [NCCAA] provides the certification process for anesthesiologist assistants in the United States. Initial certification is obtained by successfully completing the Certifying Examination for Anesthesiologist Assistants.

The Anesthesiology Program requires each student to apply for and take the Certifying Examination in his/her year of graduation. Information regarding certification and examination is available on NCCAA's web site, www.aa-nccaa.org. The Program also requires that each student apply for and take the NCCAA In-training Examination in the first year of the program.

CLASS OFFICERS AND REPRESENTATIVES

Each class elects officers and representatives. Elections are held by class members without faculty input or direction. A list of current class officers and representatives is available in the Program Office.

CLINICAL ANESTHESIA WORKBOOK

The **Clinical Anesthesia Workbook** contains information needed to develop a basic fund of clinical knowledge, as well as guidance for developing clinical skills. The workbook is provided on Blackboard and on each student's iTouch, so it is readily available at all times. The questions in each workbook section should be discussed with clinical preceptors.

Clinical Task Progression

The Workbook contains a list of clinical tasks, including definition of task, source of information for task, references, and requirements for task completion. A Clinical Task Progression Chart in the Workbook contains a time line for each task – indicating the time during which the student is expected to obtain the requisite knowledge and attain the motor skills and coordination necessary to safely accomplish the task. A box at the end of each time line represents the point at which every student must be able to demonstrate proficiency for the task. Proficiency includes having basic knowledge for the task, understanding quality assurance and risk management issues related to the task, knowing costs associated with the task, as well as being able to safely and efficiently perform the task. Evaluation of many of the clinical tasks will be made by clinical instructors at the clinical sites to which students are assigned. Testing of material in the clinical task progression series will be included in the comprehensive examinations, along with objective, structured clinical evaluations [OSCE]. The student must have completed all tasks assigned within each semester in order to receive a clinical grade for that semester and be eligible to advance to the next semester.

The first-year clinical task progression series is designed to prepare students for those clinical activities for which they will be expected to be safe and proficient when they enter their senior year. The clinical task progression series is task-achievement oriented – once the student has completed the requirements for a given task, he/she should move on to other tasks.

CLINICAL HOURS

Clinical hours are awarded for time spent taking care of patients – in preop, in the OR, in PACU, and in other patient care locations. Clinical hours are not awarded for non-clinical activities.

First Year

Each student must acquire 500 clinical hours during the first year. Any student who fails to meet the 500-hour requirement will have their first year extended in order to meet the requirement before being considered for advancement into the senior year.

Second Year

Each student must acquire 2500 clinical hours during the degree program. Any student who fails to meet the 2500-hour requirement will have their degree program extended by a minimum of one semester in order to meet the requirement.

CLINICAL EVALUATION

Evaluation of each student's clinical performance is conducted in every semester, beginning with activities in human patient simulation in the first semester. In semesters 2 - 7, for each clinical day, a student receives an evaluation by a clinical preceptor, including a grid score and comments on clinical performance. In addition to daily evaluations, the Program receives communications from anesthetists, anesthesiologists, and other providers at clinical sites. In each semester, comprehensive exams are used to help evaluate each student's fund of clinical knowledge.

The Clinical Review Committee assesses each student's clinical performance, including grid scores, clinical comments, and communications from clinical sites. The Committee takes into account the many facets of successful clinical practice, including but not limited to conduct; patient safety; communication; interaction with patients, families, and other healthcare providers; clinical skills; clinical knowledge; and case management. The Clinical Review Committee provides input into grades for all clinical anesthesia courses (ANES 561 A,B,C; ANES 660 A,B,C) and to the Progress, Promotion, and Review Committee.

CLINICAL ROTATIONS

Clinical rotations are scheduled in both academic and private practice hospitals, including hospitals within the Emory system, hospitals in metropolitan Atlanta, and out-of-town hospitals in Georgia and other states.

First-year Clinical Activity

During the first year of the Program, students progressively develop knowledge and skills in patient evaluation; vascular access; airway management; and clinical anesthesia. Each student is assigned to a single clinical site for a block of time. Clinical assignments are for partial days during each week so that clinical activity is interspersed with classroom work and laboratory sessions on a day-to-day basis.

Knowledge and clinical skills to be obtained each month are outlined in the Clinical Anesthesia Workbook. Beginning in the first fall semester, three general comprehensive examinations are administered each semester. Knowledge demonstrated on the examinations and the clinical milestones set forth in the Clinical Anesthesia Workbook must be met before the student may advance to the next semester. Failure to meet the milestones can result in retesting and/or remedial work and/or probation and/or extension of the degree program.

Senior Clinical Rotations

During the senior clinical year, clinical rotations are assigned in all subspecialty areas of anesthesia practice (general surgery, pediatrics, obstetrics, gynecology, orthopedics, neurosurgery, ophthalmology, genito-urinary surgery, vascular surgery, cardiac surgery, thoracic surgery, transplantation, trauma). Mandatory subspecialty rotations include pediatrics, obstetrics, cardiac, and preop. Each student will have a minimum of two away rotations scheduled by the Program office. Local and away rotations are defined by the Program.

Requests for specific clinical rotations must be made using the appropriate electronic request form. In order to be considered, a request must be received before the request submission deadline published by the Program. Approval of requests will be based upon clinical sites' requirements, a student's clinical performance, faculty assessment of a student's suitability for the clinical rotation, and fairness to all students. All aforementioned variables being equal, requests will be granted on a first-come, first-serve basis.

Daily Clinical Activity

Daily Case Assignments

For each clinical day, the student should contact the site's clinical coordinator, and in concert with the clinical coordinator, choose cases appropriate for level of training. Ideally for most days, cases will be available for selection for the following day. Students have targets for specific numbers of different types of cases and should work with each site's clinical coordinator to try to satisfy these targets as opportunities exist. Given each student's educational requirements, clinical coordinators will make every effort to see that the student obtains appropriate experience, including types and numbers of cases. Student clinical assignments will be made based upon constraints of the clinical site and the student's knowledge and abilities. However, it is the student's responsibility to optimize their own learning experience by

requesting specific clinical assignments through the clinical coordinator – not passively waiting for assignments.

Initial Daily Activities

For elective OR day schedules, the student is expected to be at his/her clinical site no later than 6:00 AM unless the clinical coordinator states otherwise or a different time is published in the Clinical Rotations Handbook for that clinical rotation. As a student begins to participate more fully in the anesthesia care team, the student is expected to allow sufficient time at the beginning of each clinical day to complete the following activities prior to entering the OR with the patient:

- complete the anesthesia set up in the operating room
- perform all anesthesia apparatus checkouts
- prepare all necessary monitoring
- prepare all needed drugs
- meet the patient with your preceptor
- review and update the anesthesiology consultation
- review the patient's current medical record
- review the patient's old chart (if available)
- perform all indicated vascular access, as supervised by your preceptor or designee
- administer preop medications, including antibiotics, that have been ordered
- obtain blood for laboratory tests that have been ordered.

Clinical Time

All clinical time must be spent at a student's currently assigned clinical site unless otherwise approved by the Anesthesiology Program.

Clinical time on special rotations specified by the Program (eg, OB Anesthesia, Trauma) includes time spent in the hospital when there may or may not be cases available for the student. The student will be awarded clinical hours for 100 percent of assigned time spent in the hospital on these rotations.

Clinical time on regular rotations in the first year and in the senior year is expected to be spent taking care of patients – in the OR, Preop Clinic, and elsewhere as assigned. For general OR rotations, clock-in should not occur prior to 0545 on weekdays. For cardiac rotations, clock-in should not occur prior to 0500 on weekdays.

Downtime before or between patients is expected to occur on these rotations, but the amount of downtime should be minimized by each student working closely with preceptors and the clinical site coordinator to optimize their clinical experience. With very few exceptions, students are not expected to clock clinical hours that exceed 80 percent of case hours on a regular clinical rotation. Clinical time exceeding 80 percent of case time is subject to review by the Program.

Remedial Clinical Work

Each student's clinical performance is evaluated each semester. Based upon review of evaluations and discussions with clinical faculty, the Clinical Review Committee may recommend that the Program Directors assign remedial clinical work to a student in the semester following a semester in which the student's clinical performance did not meet requisite standards. All remedial clinical time must be scheduled through the Program Office. This remedial work

may require extending the duration of the student's degree program by one semester or longer. Students may NOT arrange remedial clinical time on their own with any clinical site.

CLINICAL SITES

The Program Office maintains a current listing of clinical rotation sites.

COMMITTEES

Seven standing committees exist in the Master of Medical Science Program:

- Admissions Committee
- Advisory Committee
- Clinical Review Committee (CRC)
- Curriculum Committee
- Diversity, Equity, and Inclusion Committee
- Progress, Promotion, and Review Committee (PPRC)
- Test Committee

A list of current committee members is available in the Program Office.

CONDUCT

The student is responsible for his/her conduct at all times. Conduct can be reviewed and the privilege of working with patients can be withdrawn at any time.

Misconduct – COVID-19

The coronavirus pandemic and COVID-19 pose serious threats to the lives and well-being of everyone in the community, including students, faculty, staff, healthcare providers, and patients and their families.

To promote safety and well-being at all times, it is imperative that students . . .

- Regularly access COVID-19 resources provided by the Program, the School of Medicine, and Emory University;
- Adhere to the guidelines and policies established by the Program, the School of Medicine, and Emory University, including those related to masks, social distancing, and hand-washing;
- Use appropriate PPE at all times indicated;
- If a known or suspected coronavirus exposure occurs, immediately
 - Contact the Covid Assessment Provider via the Student Health Service portal
 - Send an email to the Program: covidalerts@emoryaaprogram.org.

Failure to follow the above policies – whether on a clinical rotation, at Executive Park, or in the community – represents misconduct. All violations of the above policies will be referred to the Progress, Promotion, and Review Committee. If a student’s actions represent a risk to others, a Program Director will suspend the student until a complete review can be completed by the Progress, Promotion, and Review Committee. Serious violations of policies related to COVID-19 are grounds for dismissal.

Misconduct – Clinical

In the practice of anesthesia, the safety and well-being of patients is every practitioner’s first and foremost concern. The confidential acquisition and maintenance of patient data are also of paramount importance. To these ends, students must always appropriately interact with patients and patients’ families, review medical records, and obtain and honestly record data.

It is the expectation of the Anesthesiology Program and the clinical rotation sites that students will conduct themselves in a professional manner at all times, including being primarily focused on patients and the well-being of the patients. To this end, cell phones, computers, and other electronic devices are NOT to be used for personal reasons in operating rooms or other patient care locations. Any clinical use of electronic information devices must be approved by the clinical preceptor at the time of use.

Examples of clinical misconduct include but are not limited to

- o commission of a felony under local, state, or federal laws
- o deceit in verbal or written communications
- o drug abuse
- o failure to maintain patient data in an appropriate, honest, confidential manner
- o falsifying or intentionally misrecording data in a drug-reporting form, including but not limited to DEA forms for scheduled substances
- o falsifying or intentionally misrecording patient data in any medical record, including but not limited to the anesthesia record and preoperative consultation
- o falsifying clinical attendance records, including the timekeeping system
- o falsifying evaluation records or case records
- o forging data or signatures in a medical record or healthcare document
- o inappropriate behavior in a clinical setting
- o inappropriate interaction with a patient or patient's family
- o vandalism
- o violation of the Health Insurance Portability and Accountability Act
- o violation of conduct regulations of a healthcare facility while on rotation
- o audio and/or video acquisitions in patient care locations
- o inappropriate use of cell phones, computers, or other electronic devices in patient care locations

Misconduct – Nonclinical

Examples of nonclinical misconduct include but are not limited to

- o cheating – knowingly acquiring, receiving, or distributing information about the content of an examination prior to administration, during administration, or following administration if the content source of said examination is confidential and secure information; provision or utilization of unauthorized aids; impermissible collaboration
- o commission of a felony under local, state, or federal laws
- o deceit in verbal or written communications
- o falsifying attendance or evaluation records
- o falsifying or manipulating data in academic or research documents
- o forging data or signatures on any Program or University document
- o neglecting mandatory requirements for program and university compliance
- o plagiarism – incorporating into one's own work, the work or expression of another without appropriately and adequately indicating the source
- o sabotage – intentional and malicious actions that impair another student's academic performance
- o theft
- o vandalism
- o inappropriate use of cell phones, computers, or other electronic devices in academic locations
- o violation of laws governing intellectual property, copyright, and fair use of copyrighted material owned by others, including Emory's own copyrights and brands
- o inappropriate use, distribution, or redistribution of curricular materials developed by Emory faculty or staff or the faculty/staff of other medical schools or educational institutions.
(When in doubt about such materials, students should seek guidance regarding appropriate use from a Program Director.)

- o sharing confidential or proprietary information that may compromise Emory's research efforts, business practices, or security.

Monitoring and Reporting

The Master of Medical Science Program employs several methods for monitoring conduct, including but not limited to clinical evaluations, proctoring of examinations, audio and video surveillance of examinations, audio and video surveillance of classrooms and other sites within the Program suite, written and verbal communications with faculty, staff, and clinical sites. In addition, other Emory locations, as well as any clinical site, may employ audio and/or video surveillance at their locations and may share audio and video surveillance information with the Master of Medical Science Program and Emory University and any of its agents when conduct issues arise.

Faculty, staff, students, and others may report conduct matters to a Program Director at any time. If a student believes that a conduct violation has occurred, that student must report the violation as soon as possible to a Program Director.

The exception to reporting conduct violations to a Program Director involves violations of academic ethics (eg, cheating, plagiarism, sabotage). If a student believes that a violation of academic ethics has occurred, that student may report the violation to any member of the Honor Council rather than to a Program Director. When a student reports a violation of academic ethics to the Honor Council, then the actions and decisions of the Honor Council shall supercede the policies of the Anesthesiology Program. Complete information related to the Honor Council and its processes can be found in the Emory University School of Medicine Student Handbook.

Process for Conduct Matters

Upon receipt of an evaluation based on misconduct or a report of alleged misconduct, a Program Director will take appropriate action based on the type and severity of the alleged misconduct. If warranted, a Program Director will refer the matter to the Progress, Promotion, and Review Committee. If the alleged conduct is deemed illegal under federal, state, or local laws or the conduct poses a threat to the student or others, pending investigation, a Program Director will suspend the clinical activity of the student.

When a conduct matter is referred to the Progress, Promotion, and Review Committee (PPRC) for investigation and review, a Program Director will inform the student in writing of the conduct matter and its referral to PPRC.

The PPRC will initially review the conduct matter and determine if the misconduct charges are warranted. If misconduct charges are warranted, the PPRC will conduct a thorough investigation, during which the Committee shall have access to all information on the student which is maintained by the Anesthesiology Program. During the review process, the student will be asked to appear before the Committee. At the conclusion of the review, including interview of the student, the PPRC will determine what action is warranted and recommend same to the Program Directors. The Program Directors, with consideration of the recommendations from the PPRC, will impose an action (see below). The student will be informed in writing by the Program Directors of the action.

Actions for Misconduct

Continuation

The student will be informed in writing that they may continue in the Program without penalty.

Continuation with Warning

The student will be informed in writing that they may continue in the Program, but if another misconduct occurs, they will be subject to penalty, probation, or dismissal – depending upon the severity of the matter.

Continuation with Penalty

The student will be informed in writing that they will receive a penalty and may continue in the Program. Penalties can include but are not limited to grade reductions, remedial/additional didactic work, remedial/additional clinical work, enrollment and successful completion of special instructional work (eg, ethics course).

Probation

The student will be informed in writing that they are being placed on probation. The probation letter will include the reason(s) for probation, the duration of probation, and the condition(s) under which probation will be ended. The probation letter will also inform the student that occurrence of other misconduct or academic probation during the period of probation may result in extension of probation, additional penalties, or dismissal from the Anesthesiology Program.

Extension of Time in the Degree Program

The student will be informed in writing that their degree program is being extended. The extension letter will include the reason(s) for extension and the duration of extension.

Dismissal

Dismissal is the action established for various types of misconduct, including but not limited to cheating, drug abuse, falsification of records, forgery, unacceptable behavior at clinical sites, and HIPAA violations. Dismissal from the Master of Medical Science Program at Emory University can occur regardless of academic standing.

Appeals for Misconduct

If the action taken for misconduct is continuation with warning, probation, or extension of time in the degree program, then the student may appeal that action within 10 days to the Chair of the Department of Anesthesiology. The appeal must be in writing and must include the basis for appeal. The Anesthesiology Department Chair's decision on the appeal is final in the matter.

If the action taken for misconduct is dismissal, then the student may appeal that action in writing within 10 days to the Executive Associate Dean for Medical Education and Student Affairs of the Emory University School of Medicine. The appeal must be in writing and must include the basis for appeal. The Executive Associate Dean's decision on the appeal is final in the matter.

Record of Misconduct

A summary of the review, recommendations, action, and appeal (if any) will become part of the student's permanent file and may be used when the student requests letters of evaluation or recommendation.

Social Misconduct

The Program will refer matters of social misconduct other than sexual misconduct to the Executive Associate Dean of the School of Medicine for review and appropriate action. Examples of social misconduct include physical abuse, verbal abuse, bullying, and personal threats.

Sexual Misconduct

The Program will refer matters of sexual misconduct to the Deputy Title IX Coordinator for the School of Medicine for review and appropriate action. Examples of sexual misconduct include sexual harassment and inappropriate sexual behavior.

Discriminatory Harassment

The Program will refer matters of discriminatory harassment – either sexual or non-sexual – to the Office of Equity and Inclusion (formerly Equal Opportunity Programs). Policies related to harassment apply to persons who are employees and students of Emory University, vendors, contractors, guests, patrons, and other third parties participating in any Emory-sponsored event or program, whether on or off campus.

Any student who feels that he/she has been subjected to any form of harassment should notify a Program Director, who will communicate about the matter with the Office of Equity and Inclusion. In addition, the student may personally inform the Office of Equity and Inclusion.

Complete information concerning Emory's policies on harassment and contact information for the Office of Equity and Inclusion can be found at <http://policies.emory.edu/1.3>.

CONTINUATION, INTERRUPTION, TERMINATION OF THE MMSC DEGREE PROGRAM

Continuation

Suitability and fitness for continuation in the Program is based upon academic performance; clinical competence, including the ability to safely care for patients; and standards of conduct appropriate for a healthcare professional. Standards of conduct include trustworthiness; responsibility to duty; appropriate interaction with patients, patients' families, and other healthcare professionals; and professional demeanor.

Continuation Requirements

In order to advance in the Master of Medical Science Program to the next semester or to graduate from the Master of Medical Science Program at the end of the degree program, a student must

- Receive a letter grade of C or above in every course;
AND
- Exhibit satisfactory clinical performance as judged by the faculty of the MMSc Program;
AND
- Have conduct and ethical behavior that in the judgement of the MMSc Program faculty meet those standards essential for an anesthesiologist assistant practitioner.

Advancement

The Progress, Promotion, and Review Committee reviews the academic performance, clinical performance, and overall conduct of each student each semester. Throughout the degree program, each student's advancement to the next semester must be approved by the Progress, Promotion, and Review Committee.

Academic Penalties

Academic Warning

An official warning from the Program Directors to a student whose performance is of concern in any curricular area – didactic, simulation, or clinical. The academic warning letter will cite the specific concern(s) and will communicate an action plan for remediation, additional simulation time, and/or modification of clinical assignments.

Academic Probation

A status assigned by the Program Directors based on recommendations from the Progress, Promotion, and Review Committee when a student's academic performance is unsatisfactory. Unsatisfactory performance occurs when a student does not meet criteria for continuation and advancement (sections above). The academic probation letter will cite the specific reason(s) that generated academic probation and will list the criteria for removal of probation. The probation letter will also inform the student that continued poor performance or misconduct during the period of probation can result in extension of probation, additional penalties, or dismissal from the Anesthesiology Program.

A student on academic probation is not in good standing, which is information that can be made available to parties within Emory University, as well as outside agencies (eg, state boards, hospitals, practice groups). A copy of the academic probation letter becomes part of a student's file and may be used as part of recommendations and requested performance evaluations. The designation of academic probation may result in the loss of financial aid.

Dismissal

If a student meets any of the following criteria within a semester, that student shall be dismissed from the Master of Medical Science Program:

- Receipt of two grades of D or one grade of F;
OR
- Receipt of one D or one F following return from a leave of absence for academic reasons;
OR
- Unsatisfactory clinical performance as determined by the Program Directors;
OR
- Conduct or ethical behavior that does not meet the standards essential for an anesthesiologist assistant practitioner as determined by the Program Directors;
OR
- Failure to complete course work or clinical assignments as determined by the course instructor.

First Year: Leave of Absence for Academic Reasons

The didactic curriculum of the Master of Medical Science Program is tightly integrated and scheduled for the four continuous semesters of the first year. The senior clinical year of the educational program is comprised of clinical rotations throughout the United States.

Anesthesiology didactic courses and basic science didactic courses are scheduled on an annual basis. All first-year didactic courses must be successfully completed before a student may advance to the senior year.

If a first-year student receives a D in any course, then that student may be eligible for a leave of absence for academic reasons.

In order for the student meeting the above criteria to be offered a leave of absence for academic reasons, then that student must complete all course work in the semester in which he/she meets the criteria for the leave of absence for academic reasons, and the leave of absence for academic reasons must be approved by the Progress, Promotion, and Review Committee.

If approved, the leave of absence will begin effective at the end of the semester in which the student receives the D. The student may then return to the Master of Medical Science Program at the beginning of the following summer semester to restart the educational program.

If the student elects to return to the Master of Medical Science Program, then he/she must meet the Program's requirements for continuation.

The alternative to leave of absence for academic reasons is dismissal from the Program.

Financial Aid Implications

Within three days of taking a leave of absence as described above, the student must contact the Financial Aid Office of Emory University and make all necessary arrangements concerning financial aid and repayment of same. Applicable rules and regulations are available from the Financial Aid Office. The student should contact Emory's Office of Financial Aid for complete information and to obtain specific answers to questions regarding financial aid and leave of absence.

Senior Year: Probation and Extension of the Educational Program

For senior students, receipt of a D in any clinical series (ANES 660A,B,C; ANES 680A,B,C) will result in probation and automatic extension of the educational program by one semester. In order to continue in the MMSc Program beyond the semester in which the D was received or in order to graduate from the MMSc Program, then that student must meet the following requirements:

- Receive a letter grade of C or above in all subsequent clinical courses (ANES 660A,B,C; ANES 680A,B,C);
AND
- Maintain a semester GPA of 2.0 or higher in all subsequent semesters;
AND
- Have an overall GPA of 2.0 or higher at the end of all subsequent semesters;
AND
- Meet all other Program requirements for continuation.

Academic Appeals

A student may appeal a course grade within 10 days of the University's posting of the grade. The appeal must be in writing to the Progress, Promotion, and Review Committee and must include the basis for appeal. The decision of the Progress, Promotion, and Review Committee is final in the matter unless the grade will result in the dismissal of the student.

If the Progress, Promotion, and Review Committee's decision is to uphold a grade will result in dismissal, then the student may appeal that the Committee's decision within 10 days to the Executive Associate Dean for Medical Education and Student Affairs of the Emory University School of Medicine. The appeal must be in writing and must include the basis for appeal. The Executive Associate Dean's decision on the appeal is final in the matter.

Interruption of Degree Program

Medical Leave

A student may petition the Program for interruption of his/her degree program because of a serious illness. In the petition, the student must provide documentation of diagnosis by a physician licensed to practice medicine in the United States and an estimate by that physician of a time to recovery sufficient to resume the degree program. Granting the petition for interruption in the degree program is solely at the discretion of the Anesthesiology Program.

Approval for a medical leave of absence may involve OMESA and the School of Medicine's Financial Office.

In order to return to Program activities following a medical leave of absence, the student must provide a statement from the treating physician that the student is cleared to return to a full academic load and clinical assignments. Per School of Medicine policy, before being permitted to return to the degree program, the student may be required to be evaluated by a practitioner selected by the School of Medicine.

Leave of Absence

First Year

A student in good standing may petition the Program for a leave of absence by submitting the request in writing, including a complete explanation for the leave. If a leave of absence is granted, leave shall be for the balance of that academic year. The student must return as a full-time student in the next academic year at the beginning of the semester in which he/she was granted leave. Tuition refund for the semester in which the leave of absence is granted shall follow University guidelines for cancellation and withdrawal. Granting a petition for a leave of absence is solely at the discretion of the Anesthesiology Program.

Senior Year

A student in good standing may request a leave of absence by submitting the request in writing, including a complete explanation for the leave. Following review of the request, the Program Director may grant a leave of absence for one to six months at the end of which the student must return as a full-time student at the beginning of an approved clinical rotation. The full one to six months of absence must be satisfactorily completed on approved clinical rotations in order for the student to meet academic and residence requirements for degree eligibility. Tuition refund for the semester in which the leave of absence is granted shall follow University guidelines for cancellation and withdrawal. Registration and payment of tuition and fees for the extended clinical time in the degree program shall follow University guidelines. Granting a petition for a leave of absence is solely at the discretion of the Anesthesiology Program.

Termination Prior to Completion of Degree

Cancellation

Registration may be cancelled during the first five days of classes without transcript deficiencies or financial penalty other than loss of deposit.

Withdrawal

A student may voluntarily withdraw from Emory University at any time. Official withdrawal requires completion and approval of withdrawal forms, which are available from the Office of Medical Education and Student Affairs in the School of Medicine. In the case of voluntary withdrawal, tuition refund will be prorated by the Office of the Bursar. No refund will be given after the fifth week of classes. No refund will be given for reduced course load.

Dismissal

A student may be dismissed from the Anesthesiology Program at Emory University for academic deficiency, for clinical deficiency, or for violation of standards of conduct (see section on CONDUCT). No refund will be given to a student who is dismissed.

Involuntary Withdrawal from Emory University

Emory University considers the safety and welfare of its students, faculty, and staff a top priority. Involuntary Withdrawal of Students from Emory can be found at <http://policies.emory.edu/8.4>. This policy and related School of Medicine policies apply to students enrolled in the Master of Medical Science Program in Anesthesiology.

COUNSELING RESOURCES

Academic Counseling

If at any time during a semester, a student receives a grade of D or lower on an examination or has a projected grade of D or lower in any course, then that student is expected to meet with the course director to review course work and overall performance in the educational program.

University Counseling Services

Complete information about Emory's counseling services can be found at www.emory.edu.

CURRICULUM

The Master of Medical Science Program in Anesthesiology offers course work and clinical rotations in a dynamic curriculum. Individual courses and clinical rotations are subject to changes in name, number, semester offered, and location.

NOTE The semesters for the course listings in this section are the semesters in which the class entering in Fall Semester 2020 will take the courses. The class that entered in Summer Semester 2019 will take the courses in the semesters published in Student Handbook 2019.

Required Anesthesiology Courses

ANES 505A. Human Patient Simulation Lab I.

Fall. Credit 5 hour. Introduction to the operating room; anesthesia machine; basic drug doses and syringe preparation; airway equipment preparation; standard physiologic monitoring; basics concepts of anesthesia induction, maintenance, and emergence; basic airway management; basic hemodynamic management; anesthesia record keeping; basics of the preoperative patient data base and anesthetic plan; basic vascular access.

ANES 505B. Human Patient Simulation Lab II.

Spring. Credit 1 hour. Basic anesthesia procedures and concepts. Anesthetic simulation cases, including decision making and critical incidences related to hemodynamics, airway management, cardiac problems, as well as equipment problem solving.

ANES 505C. Human Patient Simulation Lab III.

Summer. Credit 1 hour. Spinal and epidural anesthesia; advanced vascular access using ultrasound; vasoactive drugs used in the management of hemodynamically compromised patients. Semester ends with a capstone simulation requiring each student to bring together their knowledge and experience to successfully conduct and complete an anesthetic.

ANES 507. Introduction to Anesthesia Practice.

Fall. Credit 6 hours. Introduction to concepts and techniques of general anesthesia, regional anesthesia, and monitored anesthesia care. Includes principles of airway management, anesthesia equipment, monitoring, patient evaluation, pharmacology, and physics.

ANES 509. Anesthesia Practice Seminar.

Fall. Credit 1 hour. Weekly small group case discussions, including the concepts and techniques presented in ANES 507. Anesthesia preop consultation and anesthesia records – paper and electronic – are emphasized.

ANES 512A,B. Principles of Airway Management I, II.

Spring, Summer. Credit 1,1 hours. Structure, function, pathophysiology, and diseases of the human airway. Basic and advanced principles of elective and emergent airway management, including equipment and techniques.

ANES 513. Anesthesia Delivery Systems and Equipment.
Spring. Credit 1 hours. Compressed gases, gas distribution systems, anesthesia machines, breathing circuits, anesthesia ventilators, waste-gas scavenging, respiratory care equipment, resuscitation equipment.

ANES 516A,B. Pharmacology in Anesthesia Practice I, II.
Summer, Fall. Credit 1 hour each. Drugs specifically related to the practice of anesthesia, including inhaled anesthetics, narcotics, barbiturates, benzodiazepines, anticholinesterases and anticholinergics, neuromuscular blockers, adrenergic agonists and antagonists.

ANES 520 Practical Aspects of Anesthesia Practice I.
Fall. 1 credit hour. Social, regulatory, ethical, and professional aspects of becoming an anesthesiologist assistant. Developing effective communication skills with patients and with other healthcare providers. Evidence based medicine and clinical practice. National healthcare issues, especially those pertaining to anesthesia practice.

ANES 525. Applied Anatomy for Anesthesia Practice
Fall. 2 credit hours. Gross anatomy, histology, and medical imaging. Anatomic terms, structures, and relationships emphasizing functional significance and application in clinical anesthesia practice. Laboratory provides demonstrations on models, prosections, and digital media.

ANES 530. Physics for Anesthesia Practice.
Fall. Credit 1 hour. Physical principles and processes applied to the practice of anesthesia. Dimensional analysis; work, energy, and power; gas laws; fluid mechanics; heat transfer; vaporization; solubility, diffusion, and osmosis; fires and explosions; laser and x-ray radiation; applied electric circuit theory; time constants.

ANES 535A,B. Principles of Monitoring and Instrumentation I, II.
Summer, Fall. Credit 1, 2 hours. Principles, applications, and interpretation of monitoring used in anesthesia practice: electrocardiography; invasive and non-invasive blood pressure; oximetry; cardiac output; hemodynamic calculations; respiratory gases; ventilation; ICP; electroencephalography; temperature; renal function; neuromuscular blockade; ultrasound; echocardiography; point-of-care instrumentation.

ANES 536A. Anesthesia Practice I.
Spring. Credit 4 hour. History of anesthesia; types of anesthesia; anesthesia care team model; universal precautions and infection control; OR layout and anesthesia setup; AA practice and professionalism; intravenous catheterization; intravenous fluids; arterial cannulation; ASA-standard monitors; induction, maintenance, and emergence from anesthesia.

ANES 536B,C. Anesthesia Practice II, III.
Summer, Fall. Credit 4 hours each. Systems-based approach to physiology and pathophysiology in anesthesia practice, including applications and effects of general and regional anesthesia. Emphasizes the integration of preoperative evaluation, planning, and anesthetic management for surgical patients. Includes risk management and critical incidents in anesthesia.

ANES 540A,B,C. Clinical Methods.

Spring, Summer, Fall. Credit 1 hour each. Preoperative patient evaluation, including history taking, physical examination, chart review, and select laboratory, radiologic, and other testing. Basic EKG interpretation.

ANES 561A,B,C. Clinical Anesthesia I, II, III.

Spring, Summer, Fall. Credit 3 hours each. Foundations of the clinical practice of anesthesia gained through one-on-one supervised instruction in the operating room and other clinical locations. Grades for the 561 Clinical Anesthesia series include input from clinical evaluations; CCC participation and quizzes; and participation and performance in small discussion groups. Any student who is not on target for clinical hours at the end of summer semester will receive an incomplete (I) in ANES 561C.

ANES 611A,B,C. Senior Seminar in Anesthesia.

Spring, Summer, Fall. Credit 1 hour each. All Senior Friday activities, including patient presentations by students. Keywords review. Anesthesiology Department grand rounds. Unexcused absences will result in grade reduction.

ANES 620. Practical Aspects of Anesthesia Practice II.

Fall. 1 credit hour. Professional development related to employment and practice as an anesthesiologist assistant. National certification, state licensure, and credentialing. Medical coding and billing. Healthcare finance issues. Career and leadership opportunities at local, state, and national levels.

ANES 660A,B,C. Clinical Anesthesia I, II, III.

Spring, Summer, Fall. Credit 12 hours each. Clinical rotations in anesthesia, including all subspecialty areas, preop clinic, pain, critical care medicine. Students must be at 90 percent of the target for clinical hours for the semester in order to receive a grade in ANES 660 for that semester; otherwise an incomplete (I) will be recorded until the target is met.

ANES 680A,B,C. Comprehensive Examinations I, II, III.

Spring, Summer, Fall. Credit 2 hours each. Three general comprehensive examinations each semester cover the principles and practice of anesthesia. Three specialty comprehensive examinations during the senior year cover cardiac anesthesia, OB anesthesia, and pediatric anesthesia. Specialty examinations should be taken within 30 days of the student's completing the specialty rotation. Examination coverage is based on directed self-study and on monthly clinical concepts conferences occurring during the senior year. Each semester's grade is comprised of the scores on the three general comprehensive examinations and the scores on quizzes from the clinical concepts conferences during the semester. All general comprehensive examinations must be completed within the semester in which they are administered or within 10 days of the start of the next semester. Failure to complete an examination within the time allotted will result in a score of zero being assigned to that exam. The scores of all specialty comprehensive examinations taken during the year will be included in the grade for ANES 680C (the final semester of the senior year).

Elective Anesthesiology Courses

ANES 596R. Individual Tutorial

Each semester. Credit variable. Provides opportunity for in-depth study of a curricular topic under the direction of a faculty member.

ANES 597R. Individual Directed Study

Each semester. Credit variable. Provides opportunity for in-depth study of a non-curricular topic under the direction of a faculty member.

ANES 695R. Individual Clinical Practicum

Each semester. Credit variable. Provides opportunity for clinical experience in a subspecialty area under the direction of a faculty member.

ANES 697R. Individual Directed Study

Each semester. Credit variable. Provides opportunity for advanced study under the direction of a faculty member.

ANES 699R. Individual Research

Each semester. Credit variable. Provides opportunity for laboratory or clinical research under the direction of a faculty member.

Required Basic Science Courses

Basic science courses are taught in their respective departments in the Emory University School of Medicine.

BAHS 502. Physiology.

Fall. Credit 4 hours. Systems approach to normal function of the human body, including relevant information on anatomy. Weekly problem solving sessions, regular laboratory exercises, and clinical application to systemic disorders.

BAHS 504. Pharmacology.

Spring. Credit 3 hours. Basic principles of drug action; absorption, distribution, metabolism, and excretion of drugs; mechanisms of drug action; toxicity. Basis for the use of medicines in pharmacologic therapy of specific diseases.

Credit in Transfer

Matriculants into the Master of Medical Science Program in Anesthesiology have varied educational backgrounds – some of which may make it possible to receive credit in transfer for prior course work. The matriculant with a graduate degree (masters degree or doctoral degree) or the baccalaureate degree holder who has successfully completed applicable graduate courses within five years of application to the MMSc Program may be able to receive credit in transfer for previous graduate courses in human physiology and pharmacology.

The certified primary care physician assistant with a masters degree may be able to receive credit in transfer for his/her prior masters-level courses in human physiology, pharmacology, and clinical methods.

An applicant meeting any of the above criteria may complete a request for credit in transfer and submit the request as part of his/her application.

Neither completion of the course work listed above nor receipt of a prior graduate degree guarantees admission to the Program or that credit in transfer will be approved if the applicant is accepted into the Program. Each request will be reviewed and decided individually.

DRESS CODE

Standards of Dress and Appearance

Students are expected to convey a professional demeanor at all times – not only in their behavior but also in their dress and appearance. A professional image conveys credibility, trust, respect, and confidence to one’s colleagues, patients, and their families. In all educational settings – classroom, laboratory, and clinical environment – students are expected to be clean, well groomed, and dressed in an appropriate manner. Students are expected to dress professionally and wear a clean white coat unless otherwise instructed by faculty. Students must wear Program and SOM identification badges at all times in both clinical and academic settings.

All students are required to be clean and maintain appropriate personal hygiene. Hair and nails need to be clean, neat, and of reasonable length so as to not interfere with patient safety or with the student’s safety or ability to perform their duties. Cologne and perfume are discouraged at all times and should never be worn on days when students have clinical assignments.

Patients vary in sensitivity to and in expectations regarding the appearance of their health care providers. A reasonable rule of thumb is to dress conservatively, thereby meeting the expectations of the most sensitive patients.

Guidelines for Dress and Appearance

Hair should be neat, clean, and of a natural human color. Unless head coverings are required for religious or cultural reasons, hats and other head coverings should not be worn.

Clothing should be clean and in good repair. Women should avoid wearing bare back tops, halter tops, midriff tops, spandex tops, and short skirts. Men should wear slacks and a dress shirt. Shorts and blue jeans are not appropriate attire.

Shoes must be clean and in good repair.

Scrubs must be worn only in designated locations. Scrubs are the property of the hospital and are not to be defaced, altered, or removed from the hospital. Stained or soiled scrubs must be changed as soon as possible.

Personal protective equipment (masks, hats, shoe covers) must be removed upon leaving the OR or procedural area.

Body piercings and tattoos should not be worn or displayed in professional settings.

You should expect to receive feedback about your appearance and attire from faculty, staff, and peers. You may also receive direct or indirect feedback from patients and their families. If your appearance or attire does not meet expectations for professional or clinical environments, faculty or preceptors may ask you to change prior to continuing in that environment.

Attire at all times outside the operating room is business casual, which should be comfortable but not detract from the serious educational atmosphere or from the climate of patient care. Students should avoid attire that could be offensive to the public, peers, patients, or patients’ families.

Each student must be dressed appropriately in business casual attire whenever he/she is in any patient care environment, including entering and leaving the hospital. For clinical rotations in the operating room, appropriate attire always includes clean scrubs. Program and School of

Medicine identification must be visible at all times. In certain clinical facilities, clean scrubs with a white coat may be worn for short periods outside the operating room (eg, breaks, patient transport). When scrubs and a white coat are being worn, you must NOT wear caps or shoe covers outside the operating room.

Scrubs may be required for human patient simulation and certain labs. Changing facilities and lockers are provided for first-year students. Students may not wear scrubs to and from Executive Park. Students may not wear scrubs at Executive Park for other than HPS or required labs. Students may never wear scrubs bearing hospital designations at Executive Park.

Scrubs are not to be worn outside the operating room. Scrubs may NOT be worn to and from clinical sites, to and from classes, or in classes. A student appearing in class in scrubs may be dismissed from that class. Each day that a student appears in scrubs (top and/or bottom) in the Program facility at Executive Park, he/she will have one point deducted from his/her clinical grade for that semester.

For clinical rotations outside the operating room (eg, Preop Clinic, Pain Service), appropriate attire is always business casual and white coat with Program and EUSM identification visible.

This policy is in effect beginning with the first day of class and continuing throughout enrollment in the educational program. In addition, the dress code policies of the Emory University School of Medicine apply to students at all times. Some clinical rotation sites may have additional dress code requirements which must be followed at that site.

Failure to follow the dress code policies of the Program, Emory University School of Medicine, or an assigned clinical rotation site may result in dismissal from the clinical assignment or from class with resulting grade penalty.

EMPLOYMENT DURING THE PROGRAM

The schedule of studies and clinical activities of the Anesthesiology Program requires full-time engagement of each student. Employment during any part of the educational program may interfere with studies and clinical work and seriously jeopardize a student's ability to complete the degree program. Any student contemplating employment for any reason should discuss the matter with a Program Director before undertaking employment.

EQUIPMENT AND CLOTHING REQUIRED

Clinical experience begins in the first week and continues throughout the educational program. Labs and practica occur frequently during the first year.

Each student is required to have the following equipment with them every Program operational day:

- calculator with fractional exponents and parenthetical expression
- clean, short, white coat with Emory AA Program designation
- pen light
- six-inch, 15-centimeter ruler
- stethoscope
- student identification from Emory University School of Medicine
- student identification from the Anesthesiology Program

Failure to have all requisite equipment can result in grade penalty.

Each student must have the following equipment at Executive Park:

- solid-color scrubs¹
- combination lock

¹Scrubs will be required for some labs and some practica. Since scrubs are not to be worn to and from the Program Office at Executive Park, each student should purchase and keep one clean set of scrubs at Executive Park throughout the first year. Scrubs must be purchased. Students may not take scrubs from any hospital.

EVALUATIONS BY STUDENTS

Feedback from students is a vital part of ongoing evaluation and improvement for the Program. Written comments (anonymous or attributed) are appreciated at any time. The Program conducts periodic surveys.

Courses and Instructors

Students are asked to evaluate courses, instructors, and seminar leaders on a regular basis. Evaluations are anonymous.

Clinical Rotations and Instructors

Students are asked to evaluate clinical rotations and clinical instructors. Evaluations are anonymous.

EXAMINATIONS

The Anesthesiology Program administers examinations within courses, as well as comprehensive examinations. The purposes for these two types of examinations are distinctly different. Examination formats include paper and pencil tests; computer based testing (CBT); objective, structured clinical examinations; and oral examinations.

Unless an exception is provided by the Anesthesiology Program, all CBT quizzes and examinations must be taken only in the rooms in which the computer-based testing is being administered. Remote access to CBT quizzes and examinations is prohibited.

Remote access to CBT quizzes and examinations represents misconduct – on the part of the examinee and the individual or individuals supplying a CBT access code to the examinee.

This CBT policy applies to all courses, human patient simulation, and comprehensive examinations in the Anesthesiology Program.

Each student must have an electronic device approved by the Anesthesiology Program for computer-based testing, and that device must be up to date for testing prior to the student's entering the room in which a computer-based exam will be administered.

The Program will supply hand-held calculators for all examinations. No other electronic devices (eg, personal computers, PDAs, cell phones, electronic memory devices, other computing or communications devices) are permitted in the rooms in which examinations are being conducted. Students must leave books, book bags, and all electronic devices outside the classroom prior to the start of an examination.

Course Examinations

Course instructors will publish their examination policy, including the purpose of examination, as part of their course syllabus, which will be distributed to all students no later than the first day of class.

Students must take each examination at the time that it is scheduled within a course. If a student must miss taking a scheduled examination, then he/she must inform the course instructor via text, email, or phone prior to the start of the examination. The course instructor will inform the student concerning rescheduling the examination. Penalties for failing to take the examination when it was scheduled and/or for failing to inform the course instructor prior to the start of the examination will be applied as stated in the course syllabus.

Basic science courses schedule and administer examinations independently of the Anesthesiology Program.

Comprehensive Examinations

Comprehensive examinations are an integral part of the education requisite to becoming a safe anesthesiologist assistant practitioner. Examinations contain objective and subjective items. The purpose of the comprehensive examinations is two-fold:

- Evaluate each student's progress in developing the knowledge, skills, and clinical judgement requisite to becoming an anesthesiologist assistant practitioner
- Help prepare the student for the national Certifying Examination

Coverage of each general comprehensive examination includes material from clinical task objectives, a schedule of topic assignments, and the general fund of knowledge of the practice of anesthesia. Coverage of each specialty comprehensive examination includes material of that specialty – cardiac anesthesia, OB anesthesia, or pediatric anesthesia.

Following final scoring of a comprehensive examination, a score report and keywords will be provided to each examinee for those items missed on the examination. It is the expectation of the Program faculty that each student will utilize his/her keywords to read and review material, remediate deficiencies, and prepare for subsequent comprehensive examinations.

The comprehensive examinations are secure examinations. Prior to taking a comprehensive examination, each student must acknowledge his/her responsibility and agreement to maintain absolute confidentiality concerning the contents of the comprehensive examination. It is a conduct violation to reproduce, transmit, or store in any form or by any means – electronic, mechanical, or otherwise – any portion of a comprehensive examination. It is a conduct violation to receive or provide assistance for a comprehensive examination personally or via the use of any unauthorized aid or by impermissible collaboration.

Each comprehensive examination contains questions on critical clinical concepts. The critical concept questions are more heavily weighted questions on each examination.

First-semester Math and Pharmacology Comprehensive Examinations

Two benchmark comprehensive examinations are administered during the first semester of the degree program. Comp Exam Phar covers basic anesthesia drugs. Comp Exam Math covers basic and applied math. The schedule for these two comp exams is posted on the Program Google Calendar. Students must pass each examination at the 85 percent level or better in order to continue in the Master of Medical Science Program in Anesthesiology. Each student has three opportunities to successfully complete each exam.

A student who fails to pass all three opportunities of either exam may be offered an academic leave of absence.

First-year Comprehensive Examinations

Three general comprehensive examinations are administered during each semester – fall, spring, and summer semester. If a student misses a comprehensive examination and has an approved request to be absent, then the student must make up that examination within seven (7) days of return to the Program. If a student misses a comprehensive examination and does not have an approved request to be absent, then the student will receive a grade of F on that examination. Scores on first-year comprehensive exams are part of the grade of the clinical anesthesia course, ANES 561, for each semester.

Senior-year General Comprehensive Examinations

Three general comprehensive examinations are administered each semester for a total of nine general examinations during the senior year. If a student misses a general comprehensive examination and has an approved request to be absent, then the student must make up that examination within thirty (30) days. If a student misses a general comprehensive examination and does not have an approved request to be absent, then the student will receive a grade of F on that examination. Scores on senior general comprehensive exams comprise the grade of ANES 680A and ANES 680B in fall and spring semesters, respectively. Scores on senior general comprehensive exams in summer semester comprise part of the grade for ANES 680C (see below).

Senior-year Specialty Comprehensive Examinations

Three specialty comprehensive examinations (cardiac anesthesia, OB anesthesia, pediatric anesthesia) are administered during the senior year. Each specialty examination should be taken within 30 days following the student's completion of the specialty rotation. The student must schedule administration of each specialty examination with the Program Office.

Preliminary scores and keywords for specialty comp exams will be distributed throughout the senior year in order to provide students with keywords to assist studying in preparation for the national certifying examination. Actual scores on the specialty exams may differ from the preliminary scores that accompany keyword distribution. Actual scores for specialty exams will be reported after final key validation, which occurs in summer semester. It is the final score for each specialty exam, along with the scores of the summer semester general comp exams, that will be used to calculate the grade for ANES 680C, which will be reported at the end of summer semester.

Comprehensive Examinations for Students in an Extended Degree Program

Students whose degree program has been extended for whatever reason must take the comprehensive examinations being administered during the semester of extension.

FACULTY AND STAFF

A current listing of faculty and staff for the Anesthesiology Program is available through the Program Office.

FINANCIAL AID

Information about loans, scholarships, and deferred payments is available from Emory University's Office of Financial Aid at <http://www.studentaid.emory.edu>. Information about tuition loans is available from the Office of Medical Education and Student Affairs in the School of Medicine at <https://med.emory.edu/education/financial-aid/index.html>.

Student financial aid requests must be made annually. Rejection for financial aid for the first year does not necessarily mean that financial aid will not be available during the second year. Likewise, an award of financial aid for the first year does not guarantee financial aid for the second year.

GRADING AND REPORTING

Lecture Course Grades

Each course instructor is responsible for calculating, assigning, and reporting grades for his/her course. If a student has a question about the grade assigned for a course, the student should email his/her question to that course's instructor.

Laboratory and Simulation Course Grades

The laboratory faculty and HPS faculty are responsible for assessing student performance and for calculating, assigning, and reporting grades for labs and for HPS. Student performance in labs and HPS is based on

- attendance, including tardiness and continued presence
- preparation for the scheduled exercise
- understanding and applying procedures
- understanding and operating equipment
- understanding and applying principles of physiology, pharmacology, monitoring, and clinical methods
- desire to learn
- participation
- conduct

Conference Course Grades

The conference director is responsible for assessing student performance and for calculating, assigning, and reporting grades for conferences. Student performance in conferences is based on

- attendance, including tardiness and continued presence
- understanding topics
- desire to learn
- participation
- conduct

Seminar Course Grades

The seminar director is responsible for assessing student performance and for calculating, assigning, and reporting grades for seminars, including small discussion groups. Student performance in seminars is based on

- attendance, including tardiness and continued presence
- preparation
- quality of presentations
- understanding topics
- desire to learn
- participation
- conduct

Clinical Course Grades

Clinical anesthesia training begins during the first week and continues through the last week of the degree program. Clinical anesthesia training is a continuum during which evaluations occur daily, weekly, and monthly – depending upon the evaluation tools.

Clinical Evaluations

Evaluation of student performance in clinical includes but is not limited to

- attendance, including tardiness and continued presence
- knowledge
- skills
- multitasking
- problem solving
- completion of tasks
- desire to learn
- participation
- conduct
- overall performance

A clinical evaluation is mandatory for every day that a student has a clinical assignment – with certain exceptions (eg, Pain Service). The clinical evaluation system utilizes an electronic evaluation instrument which transmits evaluation data to the Program. The evaluation must be completed by the preceptor involved in that day's clinical activity. Failure to submit clinical evaluation data within seven (7) calendar days of a clinical assignment will result in no clinical hours being awarded for each clinical day for which the clinical evaluation data are missing.

Clinical Attendance

The Program uses timekeeping system to monitor each student's attendance on every clinical assignment and clinical hours reported on all clinical assignments. Each student must use the designated phone at the clinical site to sign in and sign out of the timekeeping system.

Failure to use the designated clinical site phone will result in no clinical hours being posted for the clinical day for which the designated phone was not used. Within a semester, every three days of failure to use the designated clinical site phone will result in reduction of that semester's clinical grade (ANES 561 or ANES 660) by one letter grade.

Reconciliation of Assignments, Attendance, and Evaluation Data

Each student's attendance and clinical evaluations must match the clinical assignment made by the Program. Assignments, attendance, and evaluation data are reviewed during each semester. Repeat submission problems or inconsistencies or irregularities in clinical time and/or evaluation data represents misconduct and may be grounds for probation or dismissal.

Key Clinical Evaluations

Students may be assessed by key clinical evaluators at each clinical rotation site. Input from these practitioners will be incorporated into clinical grades and into the information provided to the Clinical Review Committee to assist in determining the student's readiness to progress to the next clinical level.

Comprehensive Examinations

Comprehensive examinations are an integral part of clinical grading.

Clinical Scores – Daily Evaluations

In the first year and in senior year, clinical scores are derived from two components of daily evaluations. A grid score (50%) comes from preceptors’ scoring evaluation questions in the electronic evaluation instrument. A comments score (50%) is derived from additional feedback provided by preceptors and other clinical faculty. Comments are scored by the Clinical Review Committee (CRC) based on each student's aggregation of feedback during a semester; comment scoring is blinded to the students’ names. A rubric is used to assign a score for the comments; eg, an 88 is assigned to comments that reflect a student is performing satisfactorily and meeting expectations.

Clinical Grades in the First Year

Clinical course grades in the first year (ANES 561A,B,C) are derived from clinical scores on daily evaluations; performance on comprehensive examinations; and performance in Clinical Concepts Conferences, including quizzes. Weighting for each grade component varies by semester (table below).

| | Clinical Scores | Comprehensive Examinations | Clinical Concepts Conference |
|--------|-----------------|----------------------------|------------------------------|
| Spring | 23 | 72 | 5 |
| Summer | 34 | 61 | 5 |
| Fall | 42 | 53 | 5 |

Clinical Grades in the Senior Year

Clinical course grades in the senior year (ANES 660A,B,C) are derived from clinical scores on daily evaluations.

Assignment of Clinical Grades

The Anesthesiology Program reserves the right to have clinical grades assigned by the Program Directors and Program faculty based upon their review of a student's clinical evaluations, clinical comments, and communications from clinical sites and preceptors. Conduct issues may override the grade assignment that would otherwise have been made based solely on calculation of daily clinical evaluation data.

The Program makes clinical assignments based on each clinical site’s requirements pertaining to day, evening, night, and weekend rotations and call. Variance from the assignment must be submitted to the Program on an Alternate Clinical Attendance Form. If a student changes the format of a rotation without approved alternate attendance, the student’s letter grade in clinical anesthesia for that semester will be decreased by one letter grade.

GRADING

Grade Scale

The following letter grades, their indication of performance, and assigned quality points are used by the Anesthesiology Program:

| | | |
|----|---------------------------------|---|
| A | excellent | 4 |
| B | above average | 3 |
| C | average | 2 |
| D | below average | 1 |
| F | failing | 0 |
| W | withdrawal without penalty | no course credit or residence credit |
| WF | withdrawal while failing | no course credit or residence credit |
| WU | withdrawal while unsatisfactory | no course credit or residence credit |
| S | satisfactory | course credit and residence credit |
| U | unsatisfactory | no course credit or residence credit |
| IP | in progress | |
| I | incomplete | may result in a grade with credit or IF or IU |

The notation IP for *in progress* will be submitted to the Registrar's Office when work in a course extends beyond one semester.

The notation I for *incomplete* will be submitted when course work, examinations, or clinical assignments have not been satisfactorily completed within a semester. If the course work and/or examinations have not been completed within 10 days of the beginning of the next semester, a final grade of IF or IU will be assigned. An incomplete will continue for any ANES 660 course until the clinical hours target has been met for the semester in which the incomplete was assigned.

Grade Reporting

Grades for basic science courses are reported to the Registrar by each basic science department. Grades for Anesthesiology Program courses are reported to the Registrar from the Program Office. Course grades usually are available to each student within a week following the close of each semester. Students may log into the University computer system and view their grades from the Registrar's office at any time.

Transcripts

Official transcripts are available from the Office of the Registrar. The Anesthesiology Program does not provide transcripts to students or to third parties.

GRADUATION REQUIREMENTS

Suitability and fitness for graduation is based not only on scholastic achievement but also on the student's character, ethical conduct, physical abilities, and professional interaction with patients, patients' families, and other healthcare professionals. Eligibility to be awarded the Master of Medical Science degree from the Anesthesiology Program involves the following requirements:

- o Residence of seven semesters.
- o Satisfactory completion of all didactic and clinical work.
- o Continued demonstration of ethical and moral behavior.
- o Absence of any felony convictions.
- o Adherence to the rules and regulations of all institutions at which the student has had clinical rotations, especially those rules and regulations pertaining to patient care and confidentiality of medical records.
- o Attaining a minimum of 2500 clinical hours during the degree program.

Each student must successfully complete a minimum of 2500 clinical hours during the degree program in order to be considered for candidacy for graduation. There are no exceptions to the requirement for completion of the 2500 clinical hours

Degree Certification for Graduation

Emory University has a *sealed records policy* – no changes can be made to a student's record after the degree certification date. All course work, clinical work, and other degree requirements must be completed and grades submitted prior to the degree certification date.

Degree certification dates are established by the University and cannot be changed or delayed for an individual student. Delaying degree certification for one student would delay degree certification for all students – thereby affecting every student's final transcript and, therefore, credentialing and licensing.

If a student cannot complete all requirements in order to meet the degree certification date, then the student may continue in *graduate in residence* status (grad res) with the possibility of graduating at the end of the next semester. Tuition and fees for a student in grad res is published each year by the School of Medicine.

Degree certification dates are published by the University Registrar.

HEALTH REQUIREMENTS

Given the emergence of new infective organisms and the rapidity with which some communicable diseases spread, policies stated in this edition of the Student Handbook may be superseded at any time by more applicable policies of Emory University, Emory Healthcare, Emory University School of Medicine, or the Master of Medical Science Program.

See the Special Section at the beginning of this Student Handbook for coverage related to the coronavirus pandemic and COVID-19.

Policies of the School of Medicine

Policies and information for the School of Medicine can be found on Canvas in the School of Medicine (SOM) Commons module.

History and Physical Examination

A recent medical history and physical examination must be on file in the Emory University Health Service and in the Program Office prior to registration for the first semester. An updated medical history and physical examination are required prior to re-enrollment following an absence of one year or longer. Following a medical leave of absence of any duration, an updated medical history and physical examination, as well as a clearance for the reason for the medical leave, are required prior to re-enrollment.

Immunizations

Emory University and the School of Medicine have policies regarding immunizations, vaccinations, and testing. See http://studenthealth.emory.edu/hs/new_students/immunization for current information.

Each student must maintain a current immunization and testing schedule on file in the Program Office. Failure to have a current schedule will result in the student's being immediately withdrawn from clinical assignments until immunization and testing records are brought up to date.

Communicable Diseases and Infection Control

At matriculation, each student must undergo education provided by the Emory University School of Medicine pertaining to infection control. Prior to beginning any clinical assignment, each student must have a Student Infection Control Education Verification form completed and on file in the Program Office.

Throughout the degree program, each student is expected to utilize universal precautions and to comply with all OSHA-mandated safety requirements and always use OSHA-mandated protection equipment and disposables.

In the event of exposure to known or suspected pathogenic organisms, the student should do the following, depending upon the clinical location:

Emory-affiliated clinical sites Notify the Chief of the Anesthesiology Service or his/her designee and follow the protocol of the School of Medicine.

All other clinical sites: Contact the rotation's Physician Supervisor or his/her designee and follow that institution's exposure protocol.

All infectious disease exposure incidents must be reported to the Program within 72 hours using a Report of Infectious Disease Exposure.

Colds, Flu, Gastroenteritis

Colds, flu, and gastroenteritis represent risks to patients. The influenza viruses¹ and the norovirus² are highly contagious. The following precautions and actions help decrease the spread of infection. The Anesthesiology Program endorses and follows these CDC guidelines:

- Be vigilant with hand hygiene. Clean your hands before and after every patient contact – *foam in/foam out*.
- In most situations, alcohol-based hand sanitizers are the best way to clean hands. After applying, rub your hands together until the hand sanitizer has dried completely.
- To prevent spread of norovirus, wash your hands with soap and water. Soap and water work better than alcohol hand sanitizers against norovirus.
- Always clean your hands after using the restroom.
- If you are ill and have a fever:
 - You should not go to clinical – follow Program policies regarding RTA.
 - If you have a high or persistent fever, you should visit a healthcare provider (eg, Student Health or Minute Clinic) where a rapid influenza diagnostic test may be administered and you may be able to receive appropriate supportive medication if the diagnosis has been made in time. Be sure to inform the healthcare provider that you are involved in clinical medicine and are contacting patients.
 - If you have the flu, you should remain at home for 24 hours after your temperature has returned to normal.
- If you become ill or develop a fever while at clinical:
 - Notify the clinical coordinator for that site and leave clinical.
 - Notify the Program Office and follow Program policies regarding RTA.

¹Symptoms of infections caused by influenza viruses include fever (although not everyone develops fever with flu), chills, cough, sore throat, nasal congestion, myalgias, headache, and fatigue. Symptoms appear one to four days following exposure. An infected individual is contagious one day before symptoms appear and for five to seven days after becoming ill. Although the flu vaccine is required for all students, the vaccine is not 100 percent effective in preventing influenza.

²Symptoms of acute gastroenteritis caused by norovirus include nausea, vomiting, diarrhea, and abdominal pain, as well as fever, headache, and myalgias. Symptoms usually develop 12 - 48 hours after exposure. Recovery usually occurs within one to three days.

Tuberculosis

PPD Testing

PPD testing is provided through the Emory University Health Service. Students should provide one copy of each PPD test result to the Program Office and retain one copy for their files.

Frequency of required PPD testing depends upon each student's clinical rotation schedule.

PPD Conversion

During full-time enrollment in the Program, any student who undergoes PPD conversion must follow the protocol of the School of Medicine.

Guidelines for Students Infected with HIV, Hepatitis B, or Hepatitis C

Any matriculant who knows that he/she is infected with the human immunodeficiency virus (HIV) or with hepatitis C virus or with hepatitis B virus or has an active TB infection must notify the Program during the initial registration period so that appropriate action can be taken.

Any student who learns that he/she has become infected with the human immunodeficiency virus (HIV) or with hepatitis C virus or with hepatitis B virus or with tuberculosis must notify the Program immediately and must follow guidelines established by the School of Medicine.

HEALTH AND MENTAL HEALTH SERVICES

Emory University Student Health Service

The Emory University Student Health Service is located at 1525 Clifton Road on the main Emory campus. Complete information about services can be found at <http://studenthealth.emory.edu>.

EUSHS is responsible for receiving and approving each student's history and physical examination at matriculation. EUSHS maintains each student's immunization record.

Mental Health Services

Complete information about mental health services and counseling can be found at <http://studenthealth.emory.edu>.

HONORS AND AWARDS

The John E. Steinhaus Award for Academic Excellence is presented at graduation to the student with the highest overall cumulative grade point average.

The David M. Nagle Award for Clinical Excellence is presented at graduation to the student who has maintained the highest clinical grade point average and who, in the opinion of the faculty, best exemplifies dedication to clinical excellence.

The Wesley T. Frazier Achievement Award is presented at graduation to the student who in the opinion of the faculty has demonstrated persistence and self-motivation to improve his/her clinical skills during the senior year.

HOUSING

Housing information is available from Emory's Office of University Housing online at www.emory.edu/housing.

IDENTIFICATION

Picture IDs are provided by the Anesthesiology Program and by the School of Medicine. Both IDs must be worn at all times either on the student's white coat or on scrubs. The student's picture and name on the front side of the Anesthesiology Program ID must be visible at all times whenever the student is in a clinical setting.

INSURANCE

Disability Insurance

Information regarding disability insurance is available from the Office of Medical Education and Student Affairs.

Health Insurance

Students in the Anesthesiology Program at Emory University are required to have continuous health insurance coverage in force for the duration of their enrollment. Complete information about insurance requirements, including information about the waiver process, is available from the Office of Medical Education and Student Affairs.

Each student must have a copy of his/her health insurance coverage on file in the Program Office before beginning any clinical assignments. No student will be allowed to begin or continue on clinical assignments without a copy of their current health insurance coverage being on file in the Program Office.

Liability Insurance

Students who are enrolled full-time in the Emory University School of Medicine are covered by liability insurance while they are on assigned clinical rotations. Students do NOT have liability insurance coverage during clinical or nonclinical employment or during participation in programs that are not assigned as part of the Master of Medical Science Program in Anesthesiology.

LETTERS OF RECOMMENDATION

Upon written request by the student, a Program Directors or other faculty member may provide a letter or complete a form of recommendation for a student. Program Directors will utilize, among other sources, the student's record, including written and transcribed evaluations. Misconduct may be reported in letters and forms of recommendation. All requests for letters and forms of recommendation require written authorization from the student or graduate making the request. Forms are available in the Program Office. The student's written request must include a statement concerning his/her providing or not providing a waiver for his/her right to access the letter or form of recommendation.

MEETINGS

Students are encouraged to attend professional anesthesiology meetings during the first and second years of the educational program.

PHOTOGRAPHY & RECORDING

The Anesthesiology Program utilizes audio-video recording for teaching and for evaluation of students enrolled in the degree program. The Anesthesiology Program also documents Program activities at Executive Park, clinical sites, and other locations, including photographs and video recordings that include students. By enrolling in the Anesthesiology Program, the student consents to participation in these photography and video recordings.

PRACTICE OF ANESTHESIA

Personal Risks Associated with the Practice of Anesthesia

Exposure to Pathogens

Anesthesiologist assistants, physicians, nurses, and other healthcare providers that have direct contact with patients are at risk for occupational exposure to pathogenic organisms. Exposure can occur via contact with blood and other body fluids and tissues; air-borne and droplet transmission; needle stick or other penetration of skin.

The Anesthesiology Program and Emory University School of Medicine promote the safety and well-being of students as follows:

The Program and other departments and divisions in Emory University School of Medicine provide mandatory training in universal precautions and other work-safety practices.

All clinical training sites provide students on rotation with the OSHA-mandated safety and protection equipment and disposables.

In the event of exposure to known or suspected pathogenic organisms, the student is entered into a protocol established by Emory University through the Emory University Health Service and/or the protocol established by the clinical site at which the exposure occurred.

Substance Abuse

Both anesthesiologists and anesthesiologists are at greater risk for substance abuse than practitioners in other medical specialties or individuals in the general population. Handling and administering controlled substances occurs daily in the practice of anesthesia, and current literature suggests that individuals with a history of substance abuse of any kind are more likely to develop a drug abuse problem if they enter the field of anesthesiology.

If at any time during your enrollment in the degree program, you realize that you are using alcohol excessively or that you are suffering from any other form of drug abuse, you must contact a Program Director immediately so that appropriate followup can be instituted.

Exposures During Pregnancy

Certain risks exist for gravid women in healthcare environments, including exposure to communicable diseases (eg, cytomegalovirus) and exposure to anesthetic gases and vapors. The Anesthesiology Program will make every effort to minimize risks for gravid students. Any student who knows or has reason to believe that she is pregnant should speak with one of the Program Directors as soon as possible. The Program will review the student's clinical assignments, make indicated changes, and inform the clinical sites.

Technical Standards

To undertake and successfully complete the Anesthesiology Program, as well as successfully function as an anesthetist after graduation, requires that an individual meet certain fundamental physical, cognitive, and behavioral standards. The requisite technical skills include but are not limited to the following:

- o Effectively communicating verbally with patients and their family members and with other healthcare professionals.
- o Interacting with patients, including obtaining a history and performing a physical examination.
- o Effectively communicating in writing and by record keeping those data and information essential to the practice of anesthesia and the care of patients, in general.
- o Reading and comprehending written parts of the medical record and other patient care documents in order to safely and effectively participate in the practice of anesthesia.
- o Having sufficient knowledge, motor skills, and coordination to perform diagnostic and therapeutic tasks, including invasive procedures, on patients in a timely manner so as to insure the safety and well-being of the patients. These tasks include but are not limited to peripheral and central venous catheterization, arterial puncture and cannulation, bag-and-mask ventilation, laryngeal mask airway insertion and management, endotracheal intubation.
- o Having sufficient strength, motor skill, and coordination to lift, move, and position patients as required for administration of anesthesia and performance of cardiopulmonary resuscitation.
- o Having sufficient speed and coordination to quickly and safely react to emergent conditions throughout the hospital in order to assure patient safety.
- o Recognizing and differentiating colors of signals displayed on monitors; being able to work in both *light* and *dark* conditions as exist in patient care areas (eg, operating room, radiology suite, endoscopy suite); being able to recognize details of objects both near and far.
- o Hearing, processing, and interpreting multiple conversations, monitor signals, alarms, and patient sounds simultaneously in fast-paced patient care settings (eg, operating room, intensive care unit, emergency room).
- o Having no impairment that would preclude continuous performance of all of the above activities or any and all of the other activities that are an integral part of an anesthesiologist assistant's participation in the anesthesia care team.

If at any time during enrollment in the degree program, a student realizes that he/she is unable to meet any of the above technical standards, the student must contact a Program Director immediately so that appropriate followup can be instituted.

PROFESSIONAL ORGANIZATIONS

The American Academy of Anesthesiologist Assistants (AAAA) is the principal national professional organization for anesthesiologist assistants. AAAA offers a student membership category. Visit AAAA at www.anesthetist.org.

The American Society of Anesthesiologists (ASA) offers membership to anesthesiologist assistant students and practitioners. Visit the ASA at www.asahq.org.

RULES, REGULATIONS, AND POLICIES OF EMORY UNIVERSITY AND EMORY UNIVERSITY'S SCHOOL OF MEDICINE

Policies of Emory University are provided at <http://policies.emory.edu>. Additional information can also be found in the Emory University Campus Life Handbook (www.emory.edu/campus_life).

Policies of the School of Medicine can be found on Canvas in the School of Medicine (SOM) Commons module.

Each student enrolled in the Anesthesiology Program is responsible for reading, understanding, and abiding by all applicable Emory University and School of Medicine policies, rules, and regulations. Questions pertaining to rules, regulations, and policies should be directed to one of the Program Directors.

SENIOR FRIDAY & ASSOCIATED TRAVEL

During the senior year, Senior Fridays occur at the end of each one-month clinical rotation. Mandatory attendance is governed by the following rules:

- ❑ If a student has a clinical assignment within 150 miles of the Program Office at Executive Park, the student is expected to complete their Thursday clinical assignment and then return to Atlanta for Senior Friday.
- ❑ If a student has a clinical assignment between 150 miles and 800 miles of the Program Office at Executive Park, the student is expected to complete their Wednesday clinical assignment and use Thursday to return to Atlanta for Senior Friday.
- ❑ If a student has a clinical assignment greater than 800 miles from the Program Office at Executive Park and the next clinical assignment is within 150 miles of Atlanta, then the student may use the final Friday-Saturday-Sunday of the rotation to return to Atlanta for the next clinical rotation and is excused from that Senior Friday. The missed comp exam must be made up within 30 days of the Senior Friday on which it was originally scheduled.
- ❑ If a student has two clinical assignments back-to-back that are more than 800 miles apart, then the student may use the final Friday-Saturday-Sunday of the first rotation to travel to the second rotation. The student is excused from the Senior Friday between the two rotations and must make up the missed comp exam within 30 days of the Senior Friday on which it was originally scheduled.

Attendance at all clinical rotations, attendance at Senior Fridays, and travel for Senior Fridays are monitored by the Program.

SIMULATION

Simulation is used in the Anesthesiology Program both for instruction and for evaluation.

Once instruction of a topic or skill has been completed, then that topic or skill may be evaluated during any subsequent simulation session or by the use of standardized evaluation tools, including but not limited to computer based testing (CBT); written examinations; audiovisual recordings of task performance; and objective, structured clinical evaluations (OSCE).

Evaluations are conducted uniformly across student cohorts. Evaluation scores may be used in the calculation of course and/or clinical grades. Evaluations may also be used in assessing students for advancement from semester to semester during the year or for assessing students for advancement from the first year to the senior year.

SOCIAL MEDIA

Each student is responsible for his/her postings on the Internet and in social media. In all postings and social media communications, each student is expected to be courteous, respectful, and considerate of others. Inappropriate postings on the Internet or in social media represent unprofessional behavior and will be considered conduct violations. Any student who is responsible for an inappropriate posting may face disciplinary action including dismissal from Emory University without regard to academic standing.

Students should always consider the following points before posting comments, videos, pictures, or text on the Internet or on a social media site:

- There is no such thing as an *anonymous* post.
- Making postings *private* does not preclude others from copying and pasting comments onto public websites. A *private* posting that becomes public is subject to being considered a conduct violation.
- Posts or comments should be submitted with full identification. Where a student's connection to Emory is apparent, it should be made clear that the student is speaking for himself/herself and not on behalf of Emory. A disclaimer, such as *The views expressed on this [blog | website] are my own and do not reflect the views of Emory University, the School of Medicine, or the Anesthesiology Program* is required.
- Internet and social media activities may be permanently linked to the author which means that subsequent performance evaluations, future clinical rotations, and employment opportunities can be adversely affected by inappropriate postings.
- Postings on the Internet or in social media must not violate any state or federal laws.
- Postings on the Internet or in social media must not violate HIPAA regulations. This prohibition applies to both living and deceased patients.
- Postings on the Internet or in social media must not include any identification of the facility or the personnel or the cases on any clinical rotation.

STUDENT RECORDS AND FILES

The official record of each student enrolled in Emory University is maintained in the Office of the Registrar. To assist in evaluating each student's progress in the Program, records also are maintained in the Program Office. It is the policy of the Emory University School of Medicine that student records are to be maintained securely and are not to be made available to anyone other than faculty and staff of the Program and those persons involved in clinical rotations of the Program as permitted by the student.

To enable Emory University and clinical rotation sites of the Anesthesiology Program to evaluate a student's eligibility to participate in clinical rotations and to evaluate a student's performance on clinical rotations, it is necessary for Emory University and the clinical rotation sites to exchange educational records and information about that student. The educational records and information subject to release and exchange include grade reports, transcripts, evaluations, attendance records, examination results, and records of conduct and disciplinary investigations and actions. Release and exchange of educational records and information is between and among physicians, faculties, administrators, and other designees of Emory University and the facilities which have an Agreement with Emory University to provide clinical rotations. Each student must provide written permission before any records are released or exchanged.

TRAVEL & LODGING

Students are responsible for costs related to travel, parking, and lodging for all educational activities and clinical rotations during the degree program. This student responsibility includes transportation in metropolitan Atlanta, in the State of Georgia, and in other states and Washington, DC.

During the senior year, reimbursement up to \$1500 is available to cover expenses of each month of an away rotation. An annual limit of \$3000 applies unless funding for additional away rotations is approved by a Program Director. Reimbursement for housing will not be provided when low-cost or no-cost lodging is available at a senior clinical rotation site.

Students must submit original copies of receipts for which they want reimbursement. Receipts must be submitted within 14 days of the end of the rotation. Once a student has reached the annual limit, the student will be personally responsible for all subsequent away-rotation costs.

TUITION AND FEES

A current listing of tuition and fees is available in the Program Office. Payment of tuition and fees is due at registration for each semester. Tuition and fees are subject to change and will affect all students unless otherwise specified. Please refer to the University calendar for tuition payment deadlines. Payment for any semester is due approximately ten days before the official start of the academic term.

Mandatory Confirmation of Payment

Because every semester of the Anesthesiology Program contains clinical assignments and because tuition and fees must be paid at registration of each semester in order for liability insurance coverage to be in effect, no student will be permitted to participate in a clinical rotation or clinical assignment in any semester until he/she has paid tuition and fees for that semester.

WEATHER

Emory University and the Metro Atlanta Area

In the event of inclement weather in the Atlanta area, Emory University will announce a **delayed opening** or a **closing**.

University operations usually are announced by 5:30 AM. If it is not possible to specify an opening time, but it is expected that the University will open at some time during the day, an announcement to this effect will be made. The Anesthesiology Program's classes, labs, and examinations will follow the University's operational decision.

In line with School of Medicine policy, the Anesthesiology Program encourages students to attend clinical assignments if weather and roads permit doing so safely.

Clinical Rotations Outside the Metropolitan Atlanta Area

In the event of inclement weather at an away clinical rotation site, the student should follow the guidelines announced for that area by local, state, or federal authorities, or by the hospital at which the student is rotating.

FORMS

Forms to be Completed at Matriculation

The eleven forms that are part of this Student Handbook must be completed by each student by initialing the designated statements. Failure to complete all of the forms may preclude enrollment in the Anesthesiology Program.

- o Consent for Release and Exchange of Educational Records
- o Consent for Release of Medical Information
- o Acknowledgment of Continuous Health Insurance Coverage
- o Statement Concerning NCCAA Certifying Examination
- o HIPAA Confidentiality Statement
- o Confidentiality Related to Patients and Healthcare Facilities
- o Student Information
- o Consent for Photography and Recording
- o Authorization for Drug Testing and Release of Drug Test Results
- o Release and Waiver of Liability: Venous Vascular Access Lab
- o Consent for Release of Contact Information to Professional Organizations

Forms to be Used During Enrollment

Several forms (electronic and/or paper) are used during enrollment in the Program. Locations for the forms are available through the Program Office. The forms include . . .

- o Report of Infectious Disease Exposure
- o Attendance Exception Report
- o Alternate Attendance Form

MASTER OF MEDICAL SCIENCE PROGRAM IN ANESTHESIOLOGY
Emory University, Atlanta, Georgia

CONSENT FOR RELEASE AND EXCHANGE OF EDUCATIONAL RECORDS

Students in the Anesthesiology Program participate in clinical rotations which are part of the requisite course work for the Master of Medical Science degree offered by Emory University.

To enable Emory University and the clinical rotation sites to evaluate a student's eligibility to participate in clinical rotations and to evaluate a student's performance on clinical rotations, it is necessary for Emory University and the clinical rotation sites to exchange educational records and information about that student. The educational records and information subject to release and exchange include grade reports, transcripts, evaluations, attendance records, examination results, and records of conduct and disciplinary investigations and proceedings. Release and exchange of educational records and information is between and among physicians, faculties, administrators, and other designees of Emory University and the facilities which have an agreement with Emory University to provide clinical rotations.

_____ I hereby consent to the release and exchange of my educational records and information as described above.

MASTER OF MEDICAL SCIENCE PROGRAM IN ANESTHESIOLOGY

Emory University, Atlanta, Georgia

CONSENT FOR RELEASE OF MEDICAL INFORMATION

Students in the Anesthesiology Program participate in clinical rotations which are part of the requisite course work for the Master of Medical Science degree offered by Emory University. To enable Emory University and the clinical rotation sites to determine a student's eligibility to participate in clinical rotations, certain medical information about that student is required by Emory University and the clinical rotation sites.

Emory University, through its Emory University Health Service, is authorized to release to the Master of Medical Science Program in Anesthesiology, Emory University School of Medicine, and its clinical affiliates, medical information, including but not limited to immunization status, psychiatric and psychological information, information concerning infectious and communicable diseases (eg, tuberculosis, HIV/AIDS, hepatitis), information concerning alcohol and other drug abuse and treatment thereof, to be used to satisfy the health information requirements of clinical sites at which the student will rotate.

_____ I hereby release Emory University and its officers, trustees, agents, and employees from any and all liabilities, responsibilities, damages, and claims which might arise from the release of information authorized above. I hereby waive any privilege with respect to records of any psychiatrist or psychologist released to the above named individual or agency and likewise waive any privilege concerning records of infectious or contagious diseases, including HIV/AIDS, and/or drug or alcohol abuse or treatment of same. I acknowledge that this consent is valid for one year following my graduation from or withdrawal from or other termination from the Master of Medical Science Program in Anesthesiology. I understand that I may withdraw this consent for release of information at any time prior to the expiration date, except to the extent that action has been taken in reliance hereon. I further understand that Emory University may refuse to release records where it will be detrimental to my physical or mental health or to the extent that psychiatric, psychological, or other mental health records are involved.

MASTER OF MEDICAL SCIENCE PROGRAM IN ANESTHESIOLOGY

Emory University, Atlanta, Georgia

ACKNOWLEDGMENT OF CONTINUOUS HEALTH INSURANCE COVERAGE

Students in the Anesthesiology Program in the Emory University School of Medicine are required to have continuous health insurance coverage in force for the duration of their enrollment.

Each student must have proof of health insurance coverage on file in the Program Office for the duration of their enrollment.

Payment for all medical and psychiatric services – elective and emergent – are the responsibility of the student no matter what the source of an illness or injury may be. Student responsibility for payment of medical services includes all laboratory and other diagnostic and therapeutic services rendered as part of a protocol into which a student is entered in the event of exposure to known or suspected pathogenic organisms whether that protocol has been established by Emory University through the Emory University Student Health Service or by the clinical site at which the exposure occurred.

_____ I hereby acknowledge my responsibility and agree to maintain continuous health insurance coverage through the health-insurance provider established by Emory University while I am enrolled at Emory University. If now or in the future, I elect to maintain health insurance coverage different than the health insurance plan offered through Emory University, I acknowledge that it is my responsibility to obtain a waiver of this requirement according to Emory University policy.

MASTER OF MEDICAL SCIENCE PROGRAM IN ANESTHESIOLOGY
Emory University, Atlanta, Georgia

STATEMENT CONCERNING NCCAA CERTIFYING EXAMINATION

In June of each year, the National Commission for Certification of Anesthesiologist Assistants offers the Certifying Examination for Anesthesiologist Assistants, which is the entry mechanism for national certification.

The application fee and deadlines for application can be found on the NCCAA website.

It is a requirement of the Program that you apply for and take the Certifying Examination in your year of graduation.

_____ I agree that I will apply for and take the NCCAA Certifying Examination in my year of graduation.

MASTER OF MEDICAL SCIENCE PROGRAM IN ANESTHESIOLOGY

Emory University, Atlanta, Georgia

HIPAA CONFIDENTIALITY STATEMENT

IN FULFILMENT OF OBLIGATIONS UNDER THE UNDER THE HEALTH INSURANCE PORTABILITY AND ACCOUNTABILITY ACT
Prior to beginning any clinical activity, each student must review, understand, and agree to standards which protect the confidentiality and privacy of healthcare information as described in the Health Insurance Portability and Accountability Act (HIPAA). Each student will receive training on the standards enumerated on the reverse side, and a record of each student's agreement to these standards will be maintained during the student's enrollment at Emory University and for a period of ten years thereafter. A copy of a student's agreement to these standards may be made available to any clinical site at which the student rotates. When a student participates in a clinical rotation at a non-Emory clinical site, the student may be provided with training in that site's specific HIPAA policies and procedures and will be required to comply with those policies and procedures.

_____ I hereby acknowledge my responsibility under applicable Federal law to keep confidential any and all information regarding patients and healthcare facilities. I agree, under penalty of law, not to reveal to any person, except those persons authorized as clinical staff, clinical faculty, and associated personnel, any specific information regarding any patient. I further agree not to reveal to any third party any confidential information related to patients or healthcare facilities except as required by law or as permitted by law and authorized by the healthcare facility at which the information is maintained. I furthermore agree not to maintain in any form, including but not limited to print and electronic, any identifiable patient-related information, including patient's name; address in any form or format; medical record number or other unique healthcare identification number; date of birth; patient-identifiable geographic information; any full-face or comparable image.

_____ I acknowledge my responsibility and agree to never discuss any patient matters or healthcare facility matters in any public venue.

_____ I acknowledge my responsibility and agree to participate in clinical conferences without revealing any identifiable patient-related information, including patient's name; address in any form or format; medical record number or other unique healthcare identification number; date of birth; patient-identifiable geographic information; any full-face or comparable image.

_____ I acknowledge that any violation of this agreement represents unethical conduct for which I can be dismissed from the Master of Medical Science Program in Anesthesiology and Emory University regardless of academic standing.

MASTER OF MEDICAL SCIENCE PROGRAM IN ANESTHESIOLOGY

Emory University, Atlanta, Georgia

CONFIDENTIALITY RELATED TO PATIENTS AND HEALTHCARE FACILITIES

Patient Information

- All patient information regardless of source and regardless of storage format is confidential information.
- Educational discussions, including all clinical conferences, must exclude patient's name; address in any form or format; medical record number or other unique healthcare identification number; date of birth; patient-identifiable geographic information; any full-face or comparable image. Said information shall not be presented in discussion or in any viewable format, including but not limited to, printed handouts, slides, transparencies, computer-based displays.
- Furthermore, the student is responsible for the disposition of any and all case materials used in a clinical conference – even though the case materials contain no patient-identifiable information. Appropriate disposition includes release of case materials to the faculty member conducting the conference or destruction at the conclusion of conference by on-site shredding of the case materials.
- No patient information – identifiable or otherwise – may be discussed in any public venue, including but not limited to elevators, hallways, break rooms, libraries, conference rooms except those conference rooms in which a clinical conference is being formally conducted.

Healthcare Facility Information

- No information related to the identity, activities, operations, or personnel of any healthcare facility at which the student rotates as part of the Anesthesiology Program may be discussed with or revealed to any person or persons except authorized clinical staff and associated personnel at the healthcare facility and faculty and staff of the Anesthesiology Program – except as required by law or as authorized by the healthcare facility.
- At any healthcare facility at which the student rotates as part of the MMSc Program in Anesthesiology, all sources of patient data, including primary patient data (eg, patient chart) and ancillary data (eg, EKG, CXR, lab results), must be treated as confidential. Access and use of said data must comply with the guidelines of the healthcare facility.
- No patient-identifiable data in any form or format may be removed from or transmitted from the premises of any healthcare facility at which a student rotates as part of the MMSc Program in Anesthesiology.

_____ I acknowledge that any violation of the above policies related to patients and healthcare facilities represents unethical conduct for which I can be dismissed from the Master of Medical Science Program in Anesthesiology and Emory University regardless of academic standing.

MASTER OF MEDICAL SCIENCE PROGRAM IN ANESTHESIOLOGY
Emory University, Atlanta, Georgia

STUDENT INFORMATION

The following information must be on file in the MMSc Program Office at the time of your matriculation and must be updated as often as changes occur.

- Full name
- Your name as you desire it to appear on Program and University documents
- Current mailing address, including city, state, and zip code
- Current phone number
- Current email address
- Emergency contact information

_____ I acknowledge that I am responsible for maintaining current contact information on file with the Master of Medical Science Program in Anesthesiology – both while I am a student and for ninety days following graduation, withdrawal, or other termination.

MASTER OF MEDICAL SCIENCE PROGRAM IN ANESTHESIOLOGY
Emory University, Atlanta, Georgia

CONSENT FOR PHOTOGRAPHY AND RECORDING

Education and Evaluation Purposes

I hereby grant to the Master of Medical Science Program in Anesthesiology, Emory University School of Medicine, and Emory University (*University*) the irrevocable and unrestricted right and permission to create, use, and share video recordings, audio recordings, photographs, or other media that contain or capture my likeness or voice or in which my likeness or voice may be included (*Recordings*) in connection with any educational purpose related to my training and education in the Master of Medical Science in Anesthesiology Program at Emory University.

The Recordings may be used by any instructional or administrative faculty for the purpose of assessing my knowledge, skills, and clinical judgement to complete the Master of Medical Science Program in Anesthesiology.

I acknowledge and agree that any copy of the Recordings or materials containing the Recordings that is provided to me shall be used solely for my personal educational purposes and shall not be further copied or distributed by me in any medium, including electronic media such as the internet.

Media Release

The Recordings may also be used in connection with any publication or materials relating to or serving the mission and educational purposes of the University, including but not limited to advertisements, brochures, and other promotional materials. The Recordings may be used with or without my name.

I acknowledge and agree that Emory University owns all rights, title, and interest in and to the Recordings, including all copyrights thereof, and has full and unrestricted right to edit and modify the Recordings. I hereby waive my right to inspect or approve the Recordings or any finished product incorporating the Recordings. I acknowledge that I will not receive any compensation in connection with the use of the Recordings.

Furthermore, I hereby release and forever discharge Emory University, its officers, agents, and employees from any and all claims, demands, rights, and causes of action of whatever kind that I may have, caused by or arising from the use of the Recordings, including all claims for libel and invasion of privacy.

_____ By initialing this form, I signify that I have read and understand this Consent for Photography and Recording and agree to all of the above conditions.

MASTER OF MEDICAL SCIENCE PROGRAM IN ANESTHESIOLOGY
Emory University, Atlanta, Georgia

AUTHORIZATION FOR DRUG TESTING AND RELEASE OF DRUG TEST RESULTS

In order to matriculate into the Master of Medical Science Program, Department of Anesthesiology, Emory University School of Medicine (*Emory*) and to participate in Emory's clinical education programs at certain healthcare facilities with which the Master of Medical Science Program is affiliated, students must consent to drug testing. Random drug testing may also be initiated at any time by the Master of Medical Science Program or the healthcare facilities with which Emory is affiliated.

If a student refuses to submit to drug testing under any or all of the above circumstances, that student will not be eligible to continue in the Master of Medical Science Program or participate in clinical education programs offered by Emory. If test results are positive or if there is evidence (in the opinion of Emory, the clinical education site, or the testing laboratory), that the testing sample was tampered with, substituted, or altered in any way, the student will not be eligible to continue in the Master of Medical Science Program or participate in clinical education programs offered by Emory. Being unable to participate in the clinical education programs offered by Emory precludes continuing in the Master of Medical Science Program and will result in dismissal from Emory University.

Tests will detect illegal drugs, other non-prescribed intoxicants, and some prescription drugs. Positive test results caused by the appropriate use of legally prescribed medications will not affect eligibility to participate in the Master of Medical Science Program or its clinical education programs unless such use would cause my participation or performance to be unsafe or unacceptable.

_____ I hereby voluntarily consent to being tested for drugs under all of the circumstances listed above. I voluntarily consent to testing by any method that Emory deems reasonable and reliable, including blood analyses and urinalysis. I also consent to the release of the test results to Emory and to any agency or facility that is affiliated with Emory as a site for clinical education. I hereby waive any privilege concerning my drug test results for the purposes authorized above, and I hereby release Emory from any and all claims, liability, and damages that might arise from the use and/or disclosure of such information pursuant to this authorization.

MASTER OF MEDICAL SCIENCE PROGRAM IN ANESTHESIOLOGY
Emory University, Atlanta, Georgia

RELEASE AND WAIVER OF LIABILITY: VENOUS VASCULAR ACCESS LAB

An integral part of the Emory University Master of Medical Science Program in Anesthesiology is the Venous Vascular Access Lab (hereinafter IV Lab). After formal instruction and under supervision of Program faculty, each student has opportunities to insert intravenous (IV) catheters into peripheral veins of fellow students. Likewise, each student affords fellow students opportunities to insert IV catheters in himself/herself.

Risks of intravenous catheter placement include pain, bleeding, hematoma formation, bruising, thrombophlebitis, and infection.

Participation in IV Lab is voluntary.

Initial one of the following two statements:

_____ I hereby acknowledge and accept the risks associated with peripheral IV catheterization performed by an Emory University student or Program faculty and agree to voluntarily participate in IV Lab as described herein. As consideration for being permitted to participate in IV Lab, I and anyone entitled to act on my behalf now or in the future release from liability the other IV Lab participants, Emory University's Master of Medical Science Program in Anesthesiology, the Emory University School of Medicine, Emory University, and each of their respective directors, officers, employees, volunteers, agents, contractors, and representatives from any and all actions, injuries, losses, claims, or demands that may arise from the my voluntary participation in IV Lab.

_____ I decline to participate in IV Lab.

MASTER OF MEDICAL SCIENCE PROGRAM IN ANESTHESIOLOGY
Emory University, Atlanta, Georgia

**CONSENT FOR RELEASE OF CONTACT INFORMATION
TO PROFESSIONAL ORGANIZATIONS**

Each student in the Anesthesiology Program may agree to have his/her name and contact information released to certain anesthesiology professional organizations, including the American Academy of Anesthesiologist Assistants (AAAA), American Society of Anesthesiologists (ASA), Georgia Academy of Anesthesiologist Assistants (GAAA), Georgia Society of Anesthesiologists (GSA).

Initial one of the following two statements:

_____ The Anesthesiology Program may provide my contact information to the AAAA, ASA, GAAA, GSA so as long as I am enrolled in the Anesthesiology Program. I hereby release Emory University and its officers, trustees, agents, and employees from any and all liabilities, responsibilities, damages, and claims which might arise from the release of his authorized information.

_____ I decline to permit the Anesthesiology Program to release my contact information.

INSTRUCTIONS

Each student is provided with an individual PDF copy of Student Handbook 2020. There have been significant changes since the previous edition, Student Handbook 2019. You should read the 2020 edition completely.

Each student cohort will meet with the Program Directors in order to have questions answered. Any student may meet individually with a Program Director to obtain clarification or discuss concerns.

Once you have completed reading Student Handbook 2020 and participated in the meeting with Program Directors, you should

- Re-read, then initial the sections that require initialling.
- Re-read and initial each form.
- Read and sign the agreement below.

Each student must complete and sign a copy of the Student Handbook in order to complete matriculation (incoming students) or continue into the senior year (rising seniors).

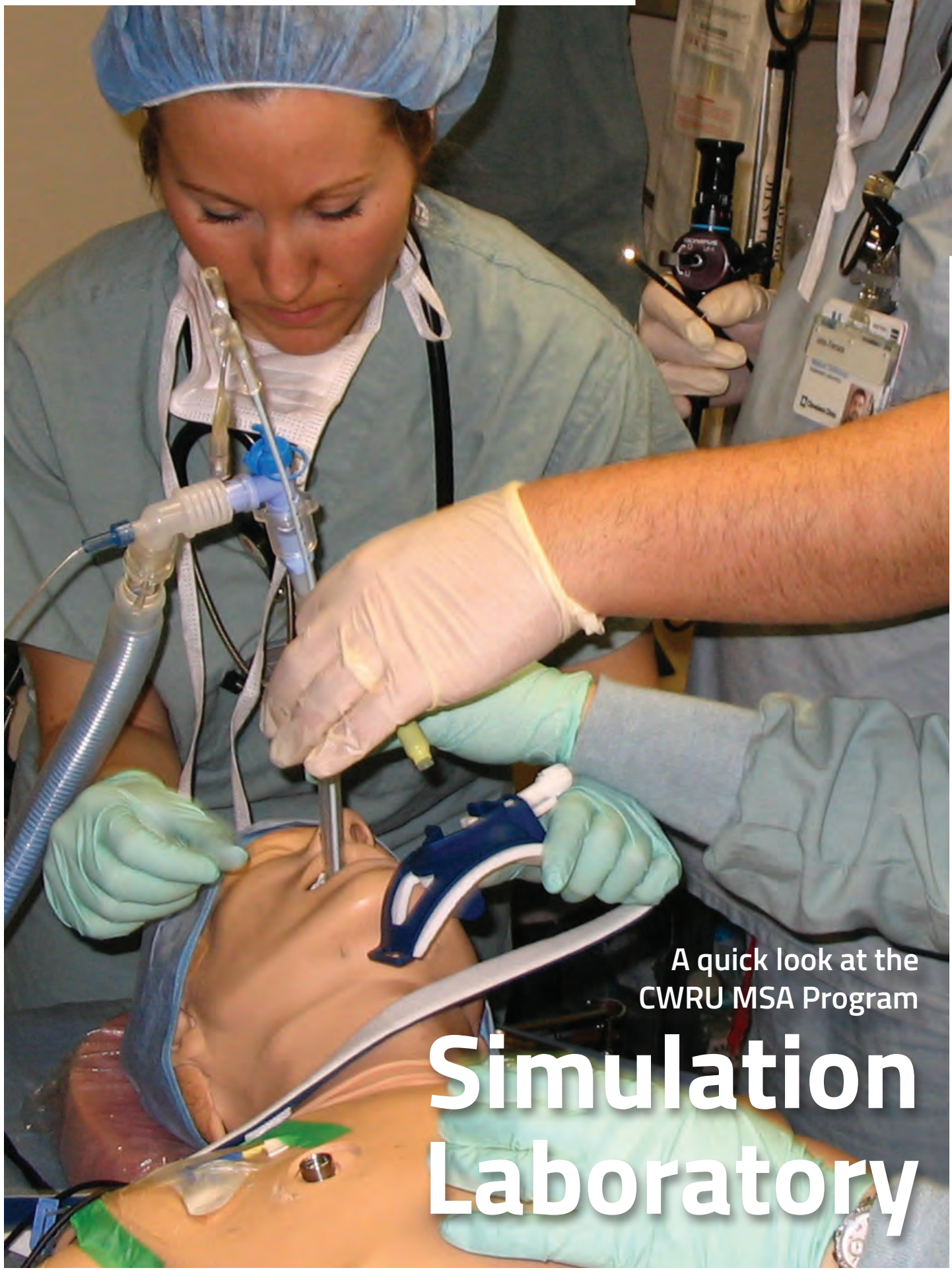
By electronically initialing all designated sections in the Handbook and by electronically entering my name and today's date below and submitting a completed copy of this document to the Master of Medical Science Program in Anesthesiology of Emory University . . .

. . . I acknowledge that have read and that I understand all sections of the Student Handbook, and I have had my questions, if any, answered satisfactorily by a Program Director.

. . . I agree to abide by the policies, rules, regulations, and guidelines set forth in the Student Handbook.

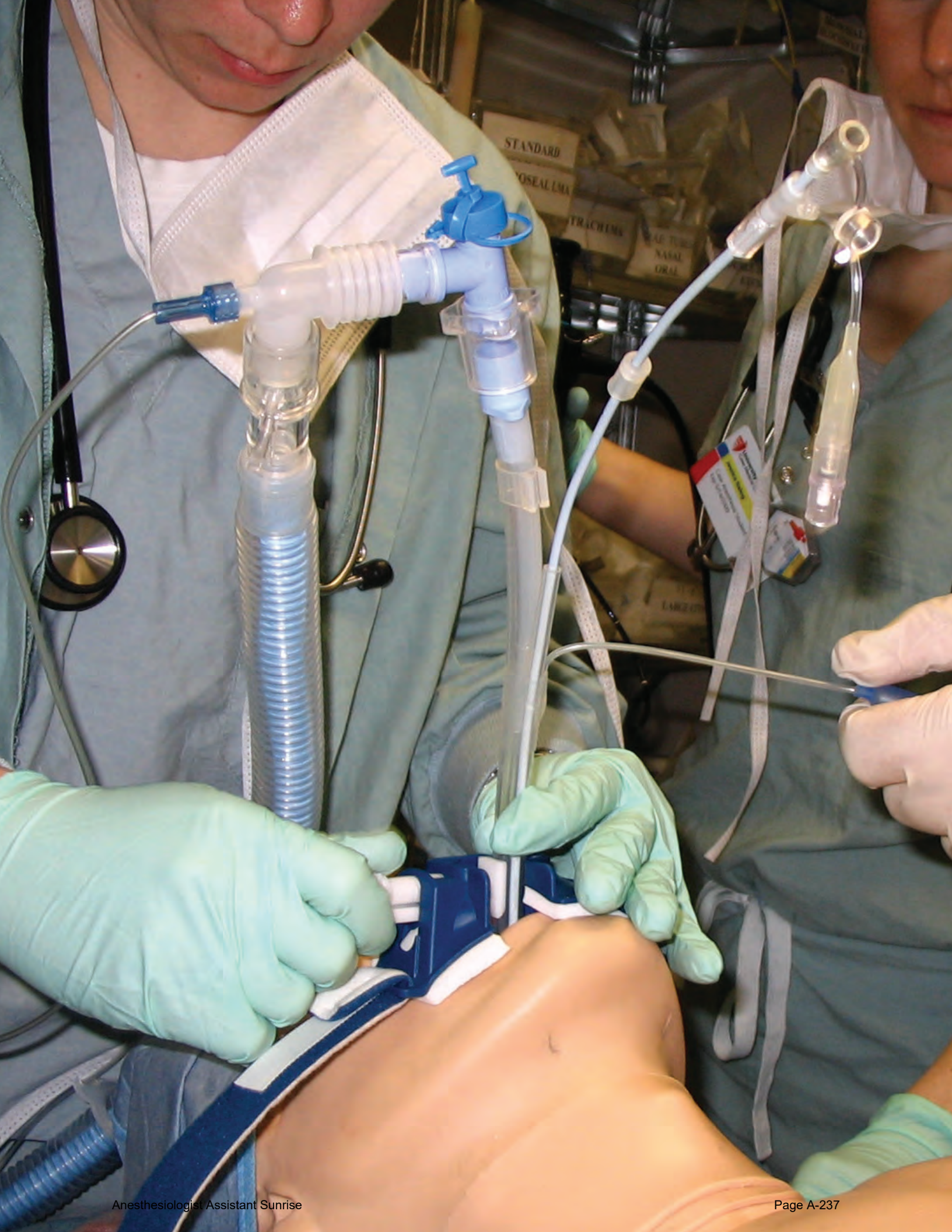
Student's Name

Date



A quick look at the
CWRU MSA Program

Simulation Laboratory



Realistic and Risk-free

The mission of the Master of Science in Anesthesia Program at Case Western Reserve University School of Medicine is to train the finest anesthetists in the world.

One component of this training is our simulation laboratory. Designed to look and feel like an operating room, sim lab allows students to hone their anesthesia care techniques through participation in real-world scenarios.

Examples of scenarios include:

- acute intraoperative unilateral pneumothorax
- anaphylactic shock
- cardiac arrhythmias
- complete upper airway obstruction
- crisis management
- hemorrhage
- hypotension and hypertension
- hypovolemia and tachycardia
- hypoxia, hypercarbia, and hyperglycemia
- intraoperative bronchospasm
- malignant hyperthermia
- post-extubation stridor
- symptomatic bradycardia
- tachycardia
- unstable ventricular fibrillation

MSA students have also participated in mock codes, such as cardiac arrests, and other serious crisis events in partnership with hospital affiliates.

Sim lab provides our students with the opportunity to practice in a realistic and risk-free environment where they can learn from their mistakes. Studies have shown that simulation training increases students' competency and speed while decreasing the risk of patient injury. Lessons translate immediately into the operating room.

Paired with clinical work, which begins just one month after the start of the MSA Program, the sim lab experience is invaluable.

All three program sites direct and operate simulation laboratories. The sim lab is an important learning space for MSA students in Cleveland, Houston and Washington, D.C. In Cleveland, the lab is also used as a collaborative space with the residency program.

Specific Preparation

There are three goals, or learning objectives, set for students in the simulation laboratory:

1. Safe Technique

Students learn how to safely take care of mock patients by performing and managing various scenarios presented to them. In these scenarios, students learn how to use basic and advanced equipment, set-up drugs and perform safe, basic intravenous and airway management. Repetition is important, and each scenario emphasizes proper and safe technique. Each simulation exercise places patient safety as the highest priority.

2. Be Specific

Sim lab is designed to augment clinical and classroom training by requiring specific preparation for specific clinical scenarios.

3. Expand on Experience

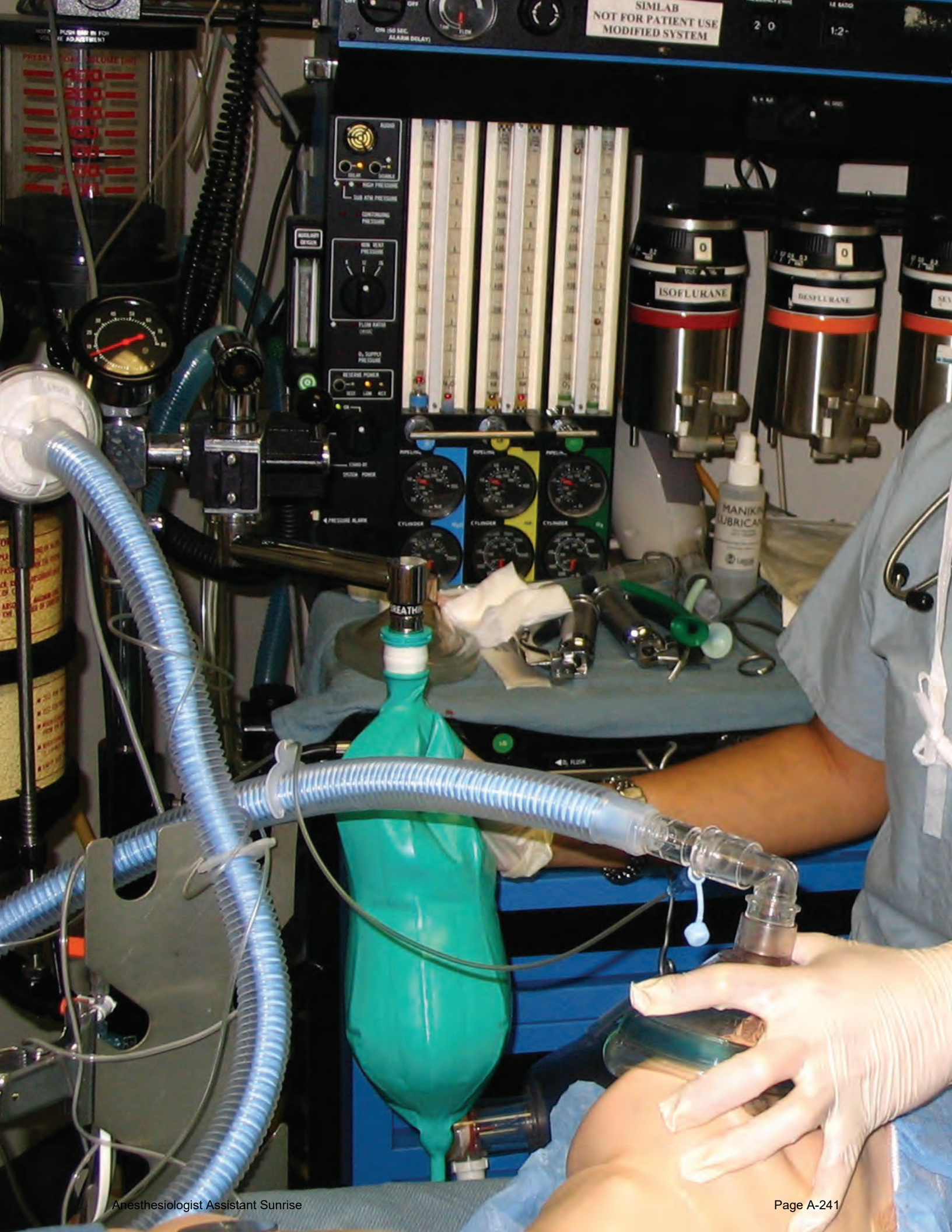
Students' tasks in sim lab will become increasingly complex as the range of equipment used and techniques practiced expands over time as the skill and clinical experience of the student expands.

Diverse Resources

The simulation laboratory requires a wide range of diverse resources including appropriate medical and audio-visual equipment as well as expert staff and consultants from disciplines such as medicine, physiology and pharmacology, electrical engineering and computer science.

Additionally, realistic cases must be selected that can be recreated by the computer-controlled simulator mannequins and by the simulation designer.





Types of Simulation

The simulation laboratory incorporates three types of simulators into student training.

Mannequin Simulators

Low fidelity simulators, including vascular models, and high fidelity simulators, including Laerdal Humanoid and CAE Apollo computer-controlled and electrically- and pneumatically-operated mannequins, are used regularly as “patients” in the sim lab. Scenarios are programmed into the simulator computer, and control all mechanical activities including head and jaw motion, vocal sounds, and a range of twenty-seven physiological and instrument parameters. The physiological parameter trends are programmed to follow actual physiological changes seen in real cases.

The laboratory also has fully functional anesthesia machines that work with these simulators.

On-screen Simulators

Sometimes called virtual simulation, this type of simulator uses graphical computer programs based on elaborate physiological models to control the actions of virtual patients. The on-screen simulators are very useful for teaching pharmacology and clinical techniques as well as illustrating the consequences of anesthesia in cardiovascular, respiratory, and renal systems in pre-, intra- and post-operative events.

Realistic Training, Real Equipment

Some of the equipment used in the simulation laboratory includes:

- adult and pediatric simulators
- anesthesia machines
- arterial line trainers
- central line trainers
- double lumen tubes
- epidural and spinal kits
- fiberoptic intubating scope
- IV trainers
- video-assisted laryngoscopes



Think Beyond the Possible

As one of the top 25 medical schools in the nation, Case Western Reserve University School of Medicine is dedicated to enhancing human health as a leader and innovator in the fields of medical education.

The Master of Science in Anesthesia Program is a premier educator of certified anesthesiologist assistants, and has led innovation in the field of anesthesia care for nearly fifty years. The MSA Program graduates superior anesthetists, and our students are known as confident, ambitious, and skilled caregivers as well as committed educators and advocates.

Learn more about the MSA Program online today.

case.edu/medicine/msa-program
216.844.8077



SCHOOL OF MEDICINE

CASE WESTERN RESERVE
UNIVERSITY

Master of Science in Anesthesia Program



Curriculum Overview

| FIRST YEAR: BASIC SCIENCE AND CLINICAL | |
|--|-------------------|
| SUMMER SEMESTER I | 8 CREDITS |
| ANES 440: Patient Monitoring and Instrumentation I | 2 |
| ANES 460: Introduction to Anesthesia | 2 |
| ANES 461: Orientation to Clinical Experience (Basic Life Support Certification) | 3 |
| ANES 485: Introduction to Physiological Model-based Simulation | 1 |
| FALL SEMESTER I | 17 CREDITS |
| ANES 403: Cardiac Electrophysiology | 2 |
| ANES 456: Applied Physiology for Anesthesiologist Assistants I | 3 |
| ANES 462: Anesthesia Clinical Correlation I | 1 |
| ANES 463: Anesthesia Clinical Experience I (Advanced Cardiac Life Support Certification) | 3 |
| ANES 475: Pharmacology for Anesthesiologist Assistants I | 3 |
| ANES 477: Clinical Decision Making in Anesthesia I | 2 |
| ANES 480: Fundamentals of Anesthetic Sciences I | 1 |
| ANES 486: Physiological Model-based Simulation I | 1 |
| ANES 488: Anesthesia Non-technical Skills Lab | 1 |
| SPRING SEMESTER I | 17 CREDITS |
| ANES 441: Patient Monitoring and Instrumentation II | 2 |
| ANES 458: Applied Physiology for Anesthesiologist Assistants II | 3 |
| ANES 464: Anesthesia Clinical Correlation II | 1 |
| ANES 465: Anesthesia Clinical Experience II (Pediatric Advanced Life Support Certification) | 4 |
| ANES 476: Pharmacology for Anesthesiologist Assistants II | 3 |
| ANES 478: Clinical Decision Making in Anesthesia II | 2 |
| ANES 481: Fundamentals of Anesthetic Sciences II | 1 |
| ANES 487: Physiological Model-based Simulation II | 1 |
| SECOND YEAR: CLINICAL | |
| SUMMER SEMESTER II | 6 CREDITS |
| ANES 467: Anesthesia Clinical Experience III | 4 |
| ANES 490: Ethics, Law and Diversity for Anesthesiologist Assistants | 2 |
| FALL SEMESTER II | 11 CREDITS |
| ANES 468: Anesthesia Clinical Correlation III | 1 |
| ANES 469: Anesthesia Clinical Experience IV | 8 |
| ANES 580: Fundamentals of Anesthetic Sciences III | 1 |
| ANES 584: Physiological Model-based Simulation III | 1 |
| SPRING SEMESTER II | 11 CREDITS |
| ANES 470: Anesthesia Clinical Correlation IV | 1 |
| ANES 471: Anesthesia Clinical Experience V | 8 |
| ANES 581: Fundamentals of Anesthetic Sciences IV | 1 |
| ANES 585: Physiological Model-based Simulation IV | 1 |
| TOTAL CREDIT HOURS | 70 |
| Credit Hours for First Year: Basic Science and Clinical | 42 |
| Credit Hours for Second Year: Clinical | 28 |
| TOTAL MINIMUM DIRECT PATIENT CARE HOURS | 2000 |
| Direct Patient Care Hours for First Year: Basic Science and Clinical | 560 |
| Direct Patient Care Hours for Second Year: Clinical | 1440 |

Case Western Reserve University (Cleveland, Ohio)

Master of Science in Anesthesia Program

Academic Requirements for Admission

The mission of the Master of Science in Anesthesia Program is to graduate skilled and compassionate anesthesiologist assistants. The admission policy reflects this goal. Applicants are considered on a variety of parameters that measure academic ability, communication skills, clinical aptitude, and personality traits.

Admission to the MSA Program requires that the following criteria are met:

1. Bachelor's degree from an accredited college or university

Applicants for admission must complete a course of study leading to a baccalaureate degree at an accredited U.S. or Canadian college or university, or its equivalent, prior to matriculation.

2. Prerequisite courses

Documentation of each of the prerequisites having been completed with a grade of B- or higher at an accredited U.S. or Canadian institution of higher learning is required. Prerequisites must be taken within five years of the application deadline. For those courses that have been repeated, the highest grade will be used in the calculation. Prerequisites include:

- one semester of biochemistry
- one year of biology with laboratory*
- one semester of human anatomy with laboratory
- one semester of human physiology
- one year of chemistry with laboratory*
- one year of organic chemistry with laboratory*
- one year of physics with laboratory*
- one semester of calculus*
- one semester of advanced statistics (preferably for the life sciences)*
- one semester of English with expository writing*

All academic requirements must be completed satisfactorily before matriculation.

- * Courses marked with an asterisk that were completed with a grade of B- or higher in excess of five years prior to the application deadline will meet the prerequisite criteria only if the MCAT composite score is 500 or higher. A high MCAT score indicates your knowledge of the coursework is still current, and we do not ask that you retake your older coursework.

3. Admissions Tests

If the applicant has taken the Medical College Admissions Test (MCAT), then they must earn a minimum composite score of 493 on the MCAT. The test must be taken within three years of the application deadline.

If the applicant has taken the Graduate Record Examination (GRE), then they must earn a minimum score of 153 in Verbal Reasoning, 156 in Quantitative Reasoning, and 4.0 in Analytical Writing. The test must be taken within five years of the application deadline.

When an applicant has taken the MCAT or GRE more than once, component scores will not be combined. If an applicant has taken both admissions tests, they should submit both official scores for review.

4. CASPer Test

Applicants must complete the Computer-Based Assessment for Sampling Personal Characteristics, or CASPer test, in order for their application to be considered complete. CASPer is an online assessment that can only be taken once per cycle. The scores are valid for one year. There is no minimum score required, but successful completion of CASPer is required in order to maintain admission eligibility. The program recommends taking CASPer before or concurrently with the submission of your application materials so that the scores will be received in a timely manner.

International Admissions

Applicants with international undergraduate, graduate or advanced degrees must meet the standard admission requirements listed above. International application requirements also include the Test of English as a Foreign Language (TOEFL), the International English Language Testing System (IELTS), or the Pearson Test of English (PTE-Academic). An Education Credential Evaluation and Authentication Report for foreign transcripts is required.

The Application Process

All materials must be received by the deadline. Candidates participate in interviews with members of the Admissions Committee, which is comprised of faculty and staff members of the MSA Program. Prospective candidates are permitted and encouraged to shadow an anesthetist in the operating room. Prior approval for this visitation is required, and dates are approved and determined by the individual location of study. An overview of the admissions timeline can be viewed [here](#).

Curriculum Overview

The 24-month program includes 70 credit hours (six consecutive semesters) of classroom and clinical instruction. The first three semesters integrate basic science and clinical instruction. During the remaining three semesters, students complete month-long rotations in all subspecialties of anesthesiology: ambulatory surgery, burns and trauma, cardiothoracic surgery, general surgery, neurosurgery, obstetrics, pediatrics, surgical intensive care unit. Clinical training focuses on all types of anesthesia including general, epidural, spinal and peripheral nerve blockade.

Instruction is also provided in advanced patient care monitoring techniques and pre-testing, calibration and operation of anesthesia delivery systems and monitors. At CWRU, our personal approach and rigorous educational standards produce compassionate and highly skilled anesthesiologist assistants.

The MSA Program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) and is based on the Standards for Anesthesiologist Assistant Programs. Graduates sit for the Certification Examination administered by the National Commission for Certification of Anesthesiologist Assistants (NCCAA) and co-sponsored by the National Board of Medical Examiners (NBME).

Additional information may be found on the [Master of Science in Anesthesia Program website](#).

| Basic Science Year | Units | | |
|--|-------|--------|------|
| | FALL | SPRING | SEMI |
| Cardiac Electrophysiology (ANES 403) | 2 | | |
| Applied Physiology for Anesthesiologist Assistants I (ANES 456) | 3 | | |
| Anesthesia Clinical Correlation I (ANES 462) | 1 | | |
| Anesthesia Clinical Experience I (ANES 463) | 3 | | |
| Pharmacology for Anesthesiologist Assistants I (ANES 475) | 3 | | |
| Clinical Decision Making in Anesthesia (ANES 477) | 3 | | |
| Fundamentals of Anesthetic Sciences I (ANES 480) | 1 | | |
| Physiological Model-Based Simulation I (ANES 486) | 1 | | |
| Anesthesia Non-Technical Skills Lab (ANES 488) | 1 | | |
| Fall Semester I = 17 credits | | | |
| Patient Monitoring and Instrumentation II (ANES 441) | | 2 | |
| Applied Physiology for Anesthesiologist Assistants II (ANES 458) | | 3 | |
| Anesthesia Clinical Correlation II (ANES 464) | | 1 | |
| Anesthesia Clinical Experience II (ANES 465) | | 4 | |
| Pharmacology for Anesthesiologist Assistants II (ANES 476) | | 3 | |
| Clinical Decision Making in Anesthesia II (ANES 478) | | 3 | |
| Fundamentals of Anesthetic Sciences II (ANES 481) | | 1 | |

| | | | | |
|---|----|----|--|---|
| Physiological Model-Based Simulation II (ANES 487) | | 1 | | |
| Spring Semester I = 17 credits | | | | |
| Patient Monitoring and Instrumentation I (ANES 440) | | | | 2 |
| Introduction to Anesthesia (ANES 460) | | | | 2 |
| Orientation to Clinical Experience (ANES 461) | | | | 3 |
| Introduction to Physiological Model-Based Simulation (ANES 485) | | | | 1 |
| Summer Semester I = 8 credits | | | | |
| Year Total: | 18 | 18 | | 8 |

| Clinical Year | Units | | |
|---|-------|--------|--------|
| | FALL | SPRING | SUMMER |
| Anesthesia Clinical Correlation III (ANES 468) | 1 | | |
| Anesthesia Clinical Experience IV (ANES 469) | 8 | | |
| Principles of Anesthesia Safety and Science Review I (ANES 580) | 1 | | |
| Physiological Model-Based Simulation III (ANES 584) | 1 | | |
| Fall Semester II = 11 credits | | | |
| Anesthesia Clinical Correlation IV (ANES 470) | | 1 | |

| | | | |
|--|----|----|---|
| Anesthesia Clinical Experience V (ANES 471) | | 8 | |
| Principles of Anesthesia Safety and Science Review II (ANES 581) | | 1 | |
| Physiological Model-Based Simulation IV (ANES 585) | | 1 | |
| Spring Semester II = 11 credits | | | |
| Anesthesia Clinical Experience III (ANES 467) | | | 4 |
| Ethics, Law and Diversity for Anesthesiologist Assistants (ANES 490) | | | 2 |
| Summer Semester II = 6 credits | | | |
| Year Total: | 11 | 11 | 6 |

Total Units in Sequence: 72

Plan of Study

Total Credit Hours = 70

Credit Hours for First Year: Basic Science and Clinical = 42

Credit Hours for Second Year: Clinical = 28

Total Minimum Direct Patient Care Hours = 2000

Direct Patient Care Hours for First Year: Basic Science and Clinical = 560

Direct Patient Care Hours for Second Year: Clinical = 1440



SCHOOL OF
MEDICINE

Master of Science in Anesthesia

Network Student Handbook

2020-2021

Revised August 2020

Table of Contents

| | |
|---|----|
| Introduction | 4 |
| Program Overview | 5 |
| Academic Policies | 6 |
| Attendance Policy for Didactic, Clinical Didactic, and Clinical Courses | 6 |
| Exam Conduct and Procedures | 12 |
| Graduation, Separation, and Academic Performance | 14 |
| Clinical Policies | 20 |
| Operating Room Time | 20 |
| On-Call Requirement | 20 |
| Clinical Performance Goals and Logging Clinical Case Data | 22 |
| Clinical Case Log Policy | 22 |
| Clinical Standards | 24 |
| Clinical Performance Goals | 26 |
| Student Clinical Performance Evaluation | 32 |
| Pregnancy Termination Disclaimer | 34 |
| Additional Student Policies | 35 |
| Program Goals and Learning Domains | 35 |
| Student Code of Conduct | 36 |
| Student Responsibilities | 37 |
| Registration | 37 |
| Our Learning Environments | 37 |
| Health Insurance Policy | 38 |
| Tuberculosis Test, Influenza Vaccine, and Other Required Immunizations | 38 |
| Pregnancy While in the Program | 39 |
| Consensual Relationships Policy | 39 |
| Work Policy | 39 |
| Drug and Alcohol Policy | 39 |
| Professional Appearance Policy | 40 |
| Licensure and Employment Disclaimer | 40 |
| Clinical Instructor and Preceptor Policy | 41 |
| Clinical Instructor Evaluations | 41 |
| Policies Specific to Second-Year Students | 41 |
| Policies Specific to Cleveland Students | 43 |
| Policies Specific to Washington Students | 44 |
| Appendix | 45 |
| Admission Policies | 46 |
| Physical and Technical Requirements | 50 |
| Network Guidelines for Satellite Rotation Proposals | 54 |
| Evaluation Form Examples | 56 |
| Forms | 77 |
| Acknowledgment of Receipt | 78 |

| | |
|--|----|
| Emergency Information | 79 |
| Release of Information Authorization | 80 |
| Authorization for Random Drug Testing and Release of Drug Test Results | 81 |
| Photo and Video Release | 82 |
| Pregnancy Termination Survey | 83 |
| Consensual Relationship Compliance Form | 84 |

Introduction

The information and policies contained in this handbook apply to students in the Master of Science in Anesthesia Program at Case Western Reserve University School of Medicine. The Program maintains locations of study in Cleveland, Ohio; Houston, Texas; and Washington, D.C.

All MSA Program students are covered by the general policies of Case Western Reserve University, which apply to all students at the University, and any applicable policies of the School of Medicine and the School of Graduate Studies.

This publication has the limited purpose of providing information concerning the Master of Science in Anesthesia Program of Case Western Reserve University School of Medicine. This publication should not be construed as an offer or contract between the University and any person. The University has the right to amend, add, or delete any information in this publication, including any course of study, program fee, or regulation of the University. Policies and regulations listed in this handbook are subject to change at any time throughout the academic year. Announcements of such changes are made on a routine basis by the MSA Program.

Any questions regarding the policies and regulations listed in this handbook should be directed to the program director or administrative operations manager at the location of study.

More information regarding policies, programs, and support services can be found at the following sites:

- Case Western Reserve University Policies at <https://students.case.edu/policy/>
- CWRU Master of Science in Anesthesia Program Policies at <https://case.edu/medicine/msa-program/curriculum/program-policies>

Additional resources are listed throughout this handbook.

Revised August 2020

Program Overview

The objective of the MSA Program is to train the student in the competent delivery of anesthesia under the medical direction of a licensed physician anesthesiologist. The didactic curriculum is designed to introduce clinical correlation concurrently and appropriately. An intentional effort is made to relate didactic lectures to clinical experiences.

Clinical instructors and students are provided with a detailed list of criteria for daily formal evaluation of performance in the operating room.

The clinical experience is designed to provide the student with ample opportunity to participate in many different types of anesthetic techniques and clinical scenarios. Upon completion of the Program, the graduate should be prepared to work effectively as a certified anesthesiologist assistant within any type of anesthesia care team. A major goal of the Program is to promote the team approach to healthcare as defined by the American Society of Anesthesiologists at www.asahq.org. Physicians, anesthesiologists, nurses, and ancillary workers operate as a team to provide the highest possible quality of care to the patient at the lowest possible cost.

The education of certified anesthesiologist assistants is a dynamic process. Student feedback is highly regarded in evaluating the structure and execution of the program. When such feedback or other circumstances warrant, reevaluation will occur within an appropriate time period and always with the ultimate goal of maintaining quality education in anesthesiology. The program intention is to provide the student with the tools to successfully attain the above objectives.

Academic Policies

The vision of the MSA Program is to educate the finest anesthetists in the world. The MSA Program is clinically-oriented, and is designed to provide superior clinical training, including elective rotations in the second year that assure our graduates are on the cutting edge of the national trend in CAA education. At the completion of the program, each student earns a master's degree in anesthesia.

Attendance Policy for Didactic, Clinical Didactic, and Clinical Courses

On-time attendance for all didactic, clinical didactic, and clinical courses is mandatory.

Student absences from class are monitored by the instructor and reported to the education coordinator and administrative operations manager at each location. Excessive absenteeism or tardiness warrant disciplinary action, a one-letter drop in grade, and counseling by the instructor. Counseling followed by repeated instances may result in dismissal from the Program.

Students are required to contact the course instructor to request an approved absence prior to the class.¹ Make-up policies for missed assignments are established by individual instructors at the start of each semester and are outlined in the respective course syllabus. Make-up sessions will be assigned by the instructor as appropriate.

Classroom and Lecture

On-time attendance is mandatory for all clinical didactic courses, including but not limited to:

- ANES 462
- ANES 464
- ANES 468
- ANES 470

All students are required to sign in to confirm their attendance at the above listed courses each week. No student may sign in for another student, and no student may ask another student to sign in for them. These actions are unacceptable and may be cause for disciplinary action or separation from the Program and University.

All three locations host additional mandatory sessions and colloquiums, including journal club, and partner with affiliate hospitals so that students may be included in hospital conferences. These additional mandatory sessions are communicated locally, and requirements are determined at the discretion of program locations.

If a student is unable to attend a didactic conference, lecture, or other mandatory session for any reason, they must call the MSA Office. An appropriate make-up assignment will be determined by the local program director.

¹ The time-off policy that follows is the minimum requirement for the Master of Science in Anesthesia Network. Local programs may establish policies above and beyond the requirements outlined here. Refer to the Policies Specific to Cleveland Students and Policies Specific to Washington Students sections for more information regarding attendance, and confirm all local procedures with the local administrative operations manager.

Clinical Rotations

The clinical experience is the focus of student training; therefore, attendance in the operating room is mandatory. The MSA Program recognizes an occasional need to be away from clinical duties, including but not limited to:

1. University Holidays

The MSA Program is clinically based; consequently, the program's academic calendar (including holidays and breaks) do not generally coincide with the University's academic calendar. Consult the Program's academic calendar, which is distributed at the beginning of the semester, or rotation schedule for time off and important dates. University holidays such as Fall Break are not Program holidays unless indicated on the Program's academic calendar; in some instances, the local Program Office will be closed but didactic, clinical didactic, or clinical courses will remain in session.

A general rule of thumb is: if the hospital where you are on rotation is open and has elective cases scheduled for the day, you are expected to be in the operating room as scheduled, even on University holidays. If you are uncertain as to whether you are expected to be in the operating room on a particular day, ask the administrative operations manager for clarification.

2. University Emergency Closures or Delays

If the University closes due to inclement weather or any other emergent reason, classes may be delayed or cancelled at the discretion of the instructor and the local Program Office may close.

Clinical days are never cancelled. Students should exercise their best judgment in determining whether to attend clinicals during inclement weather. The vital nature of hospital service requires all anesthesia personnel to arrive as scheduled in spite of severe weather and this program requires students to do the same. Calling off due to inclement weather will count as a sick day with the exception of a state-issued weather emergency.

3. Vacation Days

A student in good academic standing will be granted a total of six (6) vacation days² in the first year and fifteen (15) vacation days in the second year.³ Unused vacation days may not be carried over from the first year to the second year.

For Cleveland Students

Students are responsible for submitting their vacation day requests online through e*Value one week in advance of the vacation day requested.

For Houston and Washington Students

Students must submit a time-off request form to the education specialist and administrative operations manager by 7:00 AM one week prior to the vacation day requested.

² One day equals eight (8) hours. If a student is on a different clinical schedule where clinical days are longer than eight hours, they may need to use multiple vacation days to take this time off. Accounting for clinical time off is left to discretion of each program location.

³ MSAS II are only permitted to take five (5) clinical days off during any specific rotation. These 5 days include Program holidays. For example, in November, students may only take three (3) elective days off in addition to the two (2) days granted by the Program for Thanksgiving.

The student will be responsible for contacting their rotation site's clinical coordinator to inform them of their vacation day; clinical coordinators should be informed at least 24 hours prior to the vacation day.

MSAS II are strongly discouraged from taking time off during all specialty rotations, including but not limited to neuro, trauma, obstetrics, pediatrics, and cardiac.

Once the call schedule is distributed, MSAS II may not request a vacation day when they are assigned to take call.

Time off taken in excess of that which is allotted is not looked upon favorably by the education committee, and abuse of vacation allowances will prompt a one-letter drop in grade for Clinical Experience. Excessive abuse may result in recommendation for separation from the University.

If a student believes a leave of absence is required, they should consult the Case Leave of Absence policy and discuss next steps with their local program director.

4. Sick Days

In order to protect the safety and health of their patients and colleagues, it is imperative that students refrain from attending clinicals, didactic, and simulation activities if they are ill. When a student takes a sick day, this counts against the student's vacation time. For example, if a MSAS II has fifteen (15) vacation days and takes a sick day, they will have fourteen (14) vacation days to use for the rest of the school year.

If a student must take a sick day and does not have any remaining vacation time, he or she will be required to make up the sick day.

The student must inform all parties when they are sick, including the affiliate rotation site contact and the local education specialist each morning of illness. Procedures for calling in sick are outlined in the following section. A doctor's excuse, written by a physician documenting illness, is required of any student who takes more than three (3) consecutive sick days.⁴ Failure to provide a physician's excuse will result in a failing clinical evaluation score of one (1) for each clinical day missed without a physician's written excuse.

For Cleveland Students

All sick days that cannot be applied to vacation time, no matter where the days are incurred, must be made up at University Hospitals Cleveland Medical Center (UHCMC) or MetroHealth Medical Center (if the student is rotating at MetroHealth at that time).

It is the responsibility of the student to request a make-up day by contacting the appropriate clinical coordinator. Students should schedule their make-up days within two (2) weeks of their absence.

For students on out-of-town rotations, sick day(s) must be made up immediately upon return to Cleveland.

⁴ In Washington, refer to course syllabi for more information on scheduled and unscheduled time off policies.

For Houston Students

The Houston administrative operations manager will notify the student of the date and location for their make-up day(s).

For Washington Students

Unscheduled days off and make-up time are handled and rescheduled on an individual basis at the discretion of the Washington clinical director.

To fulfill the make-up day requirement,⁵ the student must spend at least five (5) hours in the operating room on cases. If there are not enough cases, the student must come in for a second make-up day to log the time.

If a sick day is not made up before the end of the semester, it must be made up during the break between semesters. There are no exceptions. If a sick day is not made up by the end of the break between semesters, the student will be required to stay for an additional summer semester and will not graduate with their class.⁶ In the case of a major illness or absence exceeding five (5) days in length, make-up time will be handled on an individual basis at the discretion of the local program director.

Procedure for Calling in Sick

Students at all locations must follow the procedures for their location of study outlined below each day that they are ill. Sick days cannot be requested in advance.

For Cleveland Students

1. Submit a Time-Off Request through e*Value.

Students are responsible for submitting their requests through e*Value by 6:30 am the day of their illness, and sending an email to the education specialist.

2. Notify the clinical site.

Students are responsible for notifying the anesthesia coordinator at the operating room control desk at your clinical rotation site by 6:30 am the day of your illness. Students should give their full name to the person staffing the phones, the full name of their clinical instructor, and explain that they are ill. Students must reach someone by phone; leaving a voicemail is not considered sufficient. Students should take down the name of the person with whom they speak for future verification.

Depending on the student's rotation site, they may also be required to contact the administrative anesthesia office in addition to the site's operating room control desk. Students should make sure they have the correct information for calling in sick at their clinical orientation for their clinical site.

⁵ MSAS II may take call shifts to make up sick days. One 24-hour weekend call shift can be used to make up a maximum of two (2) sick days if the student has logged at least ten (10) patient contact hours. One 12-hour weekend call shift can be used to make up one (1) sick day provided that the student has logged at least five (5) patient contact hours.

⁶ In Washington, refer to course syllabi for more information on scheduled and unscheduled time off policies.

For Houston Students

- 1. Complete the Student Time-Off Request form online.**
Students are responsible for submitting their requests online by 6:30 am the day of their illness. The link is distributed to students at the beginning of each year from the administrative operations manager.
- 2. Notify the clinical site.**
Students are responsible for notifying the MSA Program, their instructor, and their site coordinator at your clinical rotation site by 6:30 am the day of your illness. Students should give their full name to the person staffing the phones, the full name of their clinical instructor, and explain that they are ill. Students must reach someone by phone; leaving a voicemail is not considered sufficient. Students should take down the name of the person with whom they speak for future verification.

Depending on the student's rotation site, they may also be required to contact the administrative anesthesia office in addition to the site's operating room control desk. Students should make sure they have the correct information for calling in sick at their clinical orientation for their clinical site.
- 3. Enter sick day in eAnesthesiology.**
Students should log into the homepage in eAnesthesiology and e*Value. Click Academics tab, then Attendance. Select "New Request" at the bottom of the page. Select the date and reason for not attending clinicals. Click submit.

For Washington Students

- 1. Complete the SAA1 or SAA2 Time-Off Request Form.**
- 2. Refer to course syllabi for more information on scheduled and unscheduled time off policies.**

Failure to appear for a scheduled clinical day without notifying the clinical site and local Program Office will be considered a "no call-no show" event. If a student has two (2) "no call-no show" occurrences in an academic year, this will warrant a drop-in letter grade for the semester in which this second occurrence is documented. In addition to the second occurrence, the student will receive a final warning of record.

If the student has a third occurrence of "no call-no show," this will result in disciplinary action or separation at the discretion of the local program director.

5. Days Off at Facilities

Days off at facilities may include reading days and different work hours.

MSA students must report to the local Program Office that they have been given a reading day at the hospital within one (1) week of the given day. Students must ask the clinical coordinator to confirm, and must inform the local administrative operations manager.

MSAS II that are working non-typical schedules⁷ (such as 10-hour shifts Monday through Thursday) must inform the local Program Office within one (1) week of starting their rotation.

6. Bereavement Days and Leaves

Bereavement days and leaves provide students with time away from clinical responsibilities for bereavement and for the purpose of attending the funeral in the event of the death of a student's family member; student's spouse or domestic partner; or student's spouse's or domestic partner's family member.⁸

Bereavement leaves may be granted for a period of up to three (3) consecutive scheduled clinical days between the date of death through the second day following the funeral. "Consecutive scheduled clinical days" is defined as consecutive days during the same week; three days that straddle a weekend will not be permitted. Under this policy, the student is not required to make up the three (3) days utilized for bereavement leave. One (1) bereavement leave is permitted per year.

The student must notify the local Program Office as well as their clinical rotation site as soon as possible following the death of the family member. The student must also provide proof of the relationship and date of the funeral by providing the local Program Office with a copy of the obituary.

In the event that three (3) days is not sufficient for a bereavement leave, an extended leave of absence will be considered by the MSA administrative team on a case-by-case basis. Time missed in excess of three (3) days must be made up.

7. Interview Days

MSAS II are permitted up to three (3) days to use for interviewing, which do not need to be made up. The allotment includes travel time that may be required for traveling to out-of-town or out-of-state sites, and do not need to be made up. Students must submit a time-off request⁹ for interviews to the education specialist and administrative operations manager by 7:00 AM one week prior to the interview day. Requests submitted with less than one week's notice due to late notification from the employer will be evaluated on a case-by-case basis. The student must indicate in their request the location at which they are interviewing, including the name of facility, city, and state. The student must inform the clinical coordinator at their current rotation site of their planned time off.

If a student fails to inform all parties, the clinical time must be made up without exception. Interview days will not be granted after the student has formally accepted a job offer.

8. Vacation Days During an Extra Semester

Students in good academic standing who are completing an extra semester will be granted a pro-rated number of vacation days for the specific semester. Any sick days taken in the extra semester will count against the student's vacation time. The number will be determined by their local program director. The program reserves the right to award a student no vacation days.

The student will be expected to follow all procedures outlined in the Vacation Days Policy in the Network Policy Manual when using vacation days during an extra semester. Time off taken in excess

⁷ A typical schedule is understood to be 8-hour shifts Monday through Friday.

⁸ Family member is defined as a child, parent, sibling, grandparent, or grandchild.

⁹ In Cleveland, this request is submitted online through eValue.

of that which is allotted is for the extra semester is not looked upon favorably by the education committee, and abuse of vacation allowances will prompt a one-letter drop in grade for Clinical Experience. Excessive abuse may result in recommendation for separation from the University.

Exam Conduct and Procedures

Equipment needed

The MSA Program requires that students purchase a laptop computer with a working camera for proctoring purposes.

ExamSoft can be used on virtually any modern computer purchased within the last three years. Minimum system requirements for Windows and Mac operating systems can be found at <https://examsoft.force.com/emcommunity/s/article/Examplify-Minimum-System-Requirements>.

Please note that only genuine versions of an operating system on any device will be supported. Jailbroken devices will not be functional.

Conduct in the Exam Room

All exams will be monitored by the course instructor or a designated proctor. Any violation of appropriate exam conduct will be reported to the local program director and may result in sanctions against the student, including possible dismissal from the University.

Penalties for arriving late to an exam will be determined by the course instructor. Calculator policy will vary. Students will be notified before each exam is given whether they may use a calculator during the exam. The use of notes, books, formula sheets, or other materials will not be permitted for any exam and may not be brought into the exam room.

Other than a student's laptop or iPad (described above and necessary for applicable exams), no personal electronic devices of any kind are allowed in the exam room. Personal electronic devices include but are not limited to cell phones, pagers, personal stereos, MP3 players, and headphones. If a student believes that someone may need to reach them due to an emergency while they are taking an exam, the person should be instructed to contact the local MSA Office.

Students must listen carefully and follow all instructions from the exam proctor. If you encounter a problem with the exam, please inform the proctor and do not discuss the problem with other students in class. During exams, students must not engage in any conduct that disrupts other students' concentration.

Bathroom breaks are permitted during **in-person** exams. Student must leave all materials in the exam room, and may not consult any materials or person at that time.

All final exams must be completed at the scheduled time.

Submitting Exam Materials

All exam materials must be returned to the exam proctor at the conclusion of the exam. Before leaving the exam room, students should double-check that they have submitted both their answer sheet and exam or that they have successfully uploaded their exam in ExamSoft.

Conduct Outside of the Exam Room

Students should refrain from loud noises after an exam, and should not congregate outside of the exam room.

Illness or Other Emergency

If a student experiences an illness or other emergency that prevents them from taking an exam, they must notify their instructor prior to the start of the exam and leave a message with the local Program Office. An administrator will confirm receipt of their message.

No-shows for exams will receive a failing grade for the exam. Instructors will determine if the student is authorized for a make-up exam.

Exams During Elective Out-of-Town Rotations

If a student is completing an elective out-of-town rotation during a scheduled exam and is unable to make arrangements to travel back to their location of study to take the exam or is not able/authorized to take it remotely via exam proctoring software, they may be responsible for making arrangements to take the exam at a testing center. In the event that a student cannot find an appropriate testing center, the local administrative operations manager may intercede to assist the student.

Students will be responsible for all costs associated with taking an exam while rotating out-of-town, including but not limited to additional travel costs or testing center fees.

Academic Integrity

Students' behavior at all times must coincide with the University's commitment to integrity and academic honesty. To preserve an atmosphere of fairness for all students, cheating will not be tolerated. Students who cheat risk not only failing the course, but also risk dismissal from the University. The University's complete Statement of Ethics and the Academic Integrity Policy can be reviewed at <http://studentaffairs.case.edu/groups/aiboard/policysummary.html>.

In compliance with the University's policy and procedures, any student found committing acts (or suspected of committing such acts) of academic dishonesty will be referred to the Department Chair and the Dean of Graduate Studies to determine the appropriate course of action. There will be no exceptions to this policy.

Disability Services

Any students who need assistance or accommodations due to a disability are encouraged to contact the Coordinator of Disability Services in Educational Services for Students (ESS, Sears 470) to document their disability. The student is also encouraged to inform their instructors as soon as possible so that these needs may be met in a timely manner.

For additional information for students with disabilities, please review the Master of Science in Anesthesia Program's Non-Discrimination Policy at <https://case.edu/medicine/msa-program/curriculum/program-policies> or review the Program's Physical and Technical Requirements in the Appendix.

Graduation, Separation, and Academic Performance

Case Western Reserve University permits individual departments and programs to set standards for graduation and separation which are above and beyond the minimums prescribed by the School of Graduate Studies.¹⁰ This is done to enable a department to strengthen the quality of its graduates. Such additional standards must be stated in writing and presented to the Dean of Graduate Studies and to students enrolled in that program. Herein, the below section defines these standards for the Department of Anesthesiology in relation to its Master of Science in Anesthesia Program.

The standards set forth here in the Network Student Handbook shall be given in writing to all students enrolled in the program in their first year. The handbook is updated annually and made available online. The digital version is distributed at the beginning of each year to all students. In the event an amendment to the handbook is necessary at any point in the Academic Year, the amendment will be added to the digital version and distributed to all students by the Program.

Graduation Standards

Graduation from the MSA Program requires that all of the following standards and special requirements be met:

- 1. Students must maintain a grade point average (GPA) of 2.5 or higher over a 12-hour or 2 semester period, whichever comes first.**
- 2. Students must maintain a GPA of 2.75 or higher over a 21-hour or 4 semester period, whichever comes first.**
- 3. Students must finish the program of study in 5 years or less, including any leaves of absence, with a minimum GPA of 3.00.**
- 4. Overall performance is measured as a weighted sum of didactic courses¹¹ (numerically graded) and clinical courses¹² (graded by evaluations and comprehensive examinations).**
- 5. Graded (A/B/C/D/F) courses and P/NP (Pass/No Pass) courses are considered in evaluations.**

Evaluations and Grades

Clinical experience courses are evaluated by: (1) systematic analysis of numerical performance evaluations and of written comments submitted by clinical instructors; (2) analysis of the trends in these comments; and (3) the numerical grading of a comprehensive exam given at the end of the semester.

¹⁰ Minimum standards for maintenance of good standing and graduation for the University's School of Graduate Studies can be reviewed at <http://bulletin.case.edu/schoolofgraduatestudies/>.

¹¹ The didactic and clinical didactic courses are: ANES 403, ANES 440, ANES 441, ANES 456, ANES 458, ANES 460, ANES 462, ANES 464, ANES 468, ANES 470, ANES 475, ANES 477, ANES 480, ANES 481, ANES 485, ANES 486, ANES 487, ANES 490, ANES 580, ANES 581, ANES 585.

¹² The clinical courses are: ANES 461, ANES 463, ANES 465, ANES 467, ANES 469, ANES 471.

A committee of clinical instructors evaluates individual student clinical performance and progression once per semester or as needed, and can make a recommendation based on their unanimous and collective expertise in reviewing clinical comments and trends. Deliberations of these meetings are documented by a scribe, and taken into consideration for the final recommendation of the Progress and Promotions Committee.

If a didactic or clinical didactic course grade is unsatisfactory (D, F, or NP), then the course must be repeated. Students are able to repeat the course once and only once. If a student earns a C in any one semester of Physiology or Pharmacology they will be required to follow the student performance policy, outlined below.

If a clinical experience course grade is unsatisfactory (C, D, F, or NP), then the course must be repeated. Students are able to repeat the course once and only once using remediation courses 499 or 599 with university credit as arranged by the department.

If, over the duration of the program of study, the student accumulates more than one unsatisfactory grade separately in either the didactic, clinical didactic, or the clinical coursework, the result would be a recommendation for separation from the University. If a student does not earn a cumulative GPA of at least 2.5 over the course of 2 semesters in either Pharmacology or Physiology, the result would be a recommendation of separation from the University.

Progress and Promotions

Students are able to view clinical performance data online via the case log systems, and may request a meeting with the local program director to discuss their clinical progress at any time. Students are counseled mid-semester in meetings with their faculty advisor, and at the end of the semester in reviews with the local program director. During these meetings, they receive expert feedback regarding their academic performance, clinical performance, and potential as clinical practitioners. The local program director will also communicate the findings and recommendations of the Progress and Promotions Committee.

The Progress and Promotions Committee is comprised of the local program director, local medical director, and key clinical and didactic faculty. The committee reviews each student as well as the deliberations of the committee of clinical instructors, and unanimously determines if a student is promoted to the next semester, promoted with reservations, not promoted and must remediate, or recommended for separation. In the final semester of the second year, the committee will also determine if a student is recommended for graduation.

These reviews can lead to recommendations for the need for specific improvements with time limitations, repeated coursework, or other individualized learning plans as deemed necessary by the Progress and Promotions Committee and in accordance with the Student Performance Policy. Additional meetings with individual students may be scheduled at any time during the course of study if special circumstances warrant such a meeting.

At any time, students with mounting, serious problems in clinical practice and didactic coursework may be advised to voluntarily withdraw from the Program.

Student Performance Policy

Students will be required to follow the student performance policy if they meet any of the following criteria, or if it is deemed necessary by the Program administration:

- Cumulative GPA less than 3.25
- Semester GPA of less than 3.0
- More than two (2) credit hours at or below C level in one semester
- More than one C in any one semester
- C in any one semester of a core class, which includes ANES 456, 458, 475, 476, 477, and 478.
- More than three (3) course grades at or below C throughout the Program
- Probation by the academic committee
- C in any anesthesia clinical experience at any point in the Program
- D, F, or I in any class

The student will follow the student performance policy, in each of the following categories, for the corresponding duration, outlined in the table below:

| Criteria | Duration of Student Performance Policy |
|--|--|
| Deemed necessary by the Program administration | Until the Program administration deems appropriate |
| Cumulative GPA of 3.25 or less | Until cumulative GPA is increased to 3.25 or above |
| Semester GPA of 3.0 or less | Until the following semester ends; all other criteria for the student to be in good standing must be met |
| More than two (2) credit hours at or below C level in one semester | Until the following semester ends; all other criteria for the student to be in good standing must be met |
| More than one C in any semester | Until the following semester ends; all other criteria for the student to be in good standing must be met |
| C in any core class | Until the following semester ends; all other criteria for the student to be in good standing must be met |
| More than three (3) course grades at or below C throughout the Program | For the duration of the program |
| Probation by the academic committee | While on probation or as the academic committee instructs |
| C in any anesthesia clinical experience at any point in the Program | For the duration of the program |
| D, F, or I, in any class | At the discretion of the local program director |

Program administration may notify a student of their requirement to follow the student performance policy, but students are responsible for knowing if they need to follow the student performance policy and should begin following the protocol outlined here:

1. Submit a learning plan to program administration for approval prior to the start of the semester.

Learning plans must include: (1) learning goals for a specific period of time; (2) a series of actions, known as the action plan, outlined for each learning goal; and (3) one or more resources assigned to each action, including but not limited to mentors, instructors, textbooks, and websites.

Learning plans are most effective when reviewed and maintained daily. Therefore, the student shall also keep a daily activity log, tracking all daily activity associated with each learning goal in the approved learning plan. All anesthetic learning activities; reading,

studying, clinical, classroom, conferences, and rounds should be tracked and logged. This daily activity log is to be maintained daily, and is subject to audit by program administration.¹³

- 2. Schedule at least one meeting with program director or assistant program director to discuss progress in relation to the learning plan prior to mid-semester conferences, preferably after the first didactic exams, and at least one meeting after mid-semester conferences at least two weeks before finals week.**

During this meeting, daily activity logs will be checked and learning plans will be evaluated using the learning plan assessment rubric. Students must earn a passing score on this assessment, defined as a 3.0 out of 5.0 or above.

Students who fail to perform or fail assessment of any of the student performance protocols listed here will be brought to an academic committee meeting for further review. The academic committee will make one or more of the following recommendations based on information gathered and presented during the investigation and subsequent meeting: (1) no reprimand; (2) reprimand; (3) reprimand and sanctions; or (4) separation from the Program.

If a student fails to follow student performance protocol, the first instance will result in a written warning. Any instance following a written warning will result in action by the Progress and Promotions Committee, including possible separation from the Program.

Remediation

In extreme cases where a student does not meet expectations and the student performance policy does not suffice, a student must remediate.

The reason(s) for the student's need for remediation shall be presented to the student in writing with supporting documentation and personal counseling. The duration and type of remediation shall be specified in writing. The criteria for graduation or separation shall be specified in writing.

No more than one remediation period shall be offered to a student.

Withdrawal and Leave of Absence Policy

If it is necessary for a student to withdraw formally from the program, a letter stating this fact must be submitted by the student to the MSA Program and to the School of Graduate Studies.

A student who withdrew must reapply if they wish to reenter the program. Their records are not adversely altered by this event, but they must compete with all other applicants for the program slots and will be held to the admissions standards. A position will not be held open under these circumstances.

Students may be encouraged to take a leave of absence (LOA) instead of withdrawing if the Program leadership deems this appropriate and if studies can be resumed within one year's time. The student must submit a petition in writing for LOA status, and the program leadership must accept the petition.

¹³ If audited or otherwise asked to produce the daily activity log, the student must produce the log within the timeframe set by the administration, which may be defined as the total time required to travel to the student's home; print, copy, or download the log; and return to the local Program office.

Acceptance of the petition will contain requirements for reentering the program within one year after LOA status is granted. The student will remain in good standing with the University and will not need to reapply for admission into the Program. A position will be held open for a LOA student who declares intent to rejoin the program and reaffirms that intent every semester during the period of the leave of absence. The dates for reaffirmation for a LOA student are:

- **Summer semester:** the first week of July
- **Fall semester:** the first week of December
- **Spring semester:** the first week of February

If the student fails to meet any of these reaffirmation deadlines, LOA status is revoked and the held position will be opened for general application.

A LOA student is required to submit a new tuition deposit of \$3,000 by March 1 prior to the academic year in which the student plans to return. For example, if the LOA student plans to return Fall semester 2018, then tuition deposit is due March 1, 2018. Tuition deposits are applied to the first semester's tuition, and are forfeited if the student ultimately determines they cannot return.

The student must rejoin in the proper sequence so that all required work is taken; any necessary preparatory or review work will be the responsibility of the student and may be arranged with the help of Program leadership.

If a student does not withdraw formally, does not request a leave of absence, and does not register for a required semester, then the Department will send a registered letter to the student at the last known address advising the student to submit a withdrawal letter. If no response is received in two (2) weeks, then the Department will advise the School of Graduate Studies of the situation, and the student will be withdrawn from the Program in absentia.

Separation

Separation is the termination of the academic relationship between the student and the University. Separation may result from the failure to maintain good standing as defined by the School of Graduate Studies.

If a decision to separate has been made, the student will be counseled to withdraw voluntarily from the Program before a recommendation for separation is sent to the Dean of the School of Graduate Studies. A formal withdrawal by the student will avoid the separation procedure.

Once the decision to separate a student is final, a recommendation is sent to the Dean accompanied by supporting documentation. Separation will then terminate the student's academic record and relationship with the University. A notation on the transcript records the academic separation, but does not affect the GPA.

Separated students may not contact their clinical or didactic instructors directly to discuss the University's decision to separate or the results of the Progress and Promotions Committee. All questions regarding the separation process should be directed to the Dean.

The admission committee generally does not consider students for readmission who have been separated from the MSA Program by the University.

Grievances

Students should feel comfortable filing grievances of any nature.

Student grievances should be submitted in writing to both the local program director and medical director. The grievance, subsequently, will be presented to the education committee, which consists of the local MSA program director, medical director, faculty, clinical coordinators, and administrative operations manager. If the decision of the education committee is unsatisfactory after presentation, student grievances regarding grading, academic evaluation, or other matters will then be submitted to the Chair of the Department of Anesthesiology. In the event that the grievance remains unresolved it will be sent to the Dean of Graduate Studies and will be handled according to the School of Graduate Studies policy.

For Washington Students

Our DC location is also locally licensed by The Office of the State Superintendent of Education (OSSE) Higher Education Licensure Commission (HELC). Please note that the HELC is the final resort for a student grievance.

Delayed Graduation

The education committee has the authority to delay graduation based on its unanimous, documented concern about a student's clinical expertise or safety. The committee must unanimously decide that a student is not ready to graduate, and then communicate that decision to the student and recommend remediation for a specified period of time.

The options of LOA or withdrawal are open to such students, but should be discussed in individual counseling sessions prior to remediation and should not be used to offset bad performance.

Clinical Policies

Operating Room Time

Students are required to arrive early enough to allow for proper setup for the day's cases and discussion of the anesthetic plan with teaching staff, including but not limited to the attending anesthesiologist, senior anesthetist, or anesthesia resident. Students will be expected to have the appropriate medications, supplies, and equipment available in the operating room, and to have completed the preoperative evaluation before the patient enters the room. When possible and appropriate, students should do preoperative evaluation of patients the day before scheduled surgery if the patient is in-house. Student performance will be inspected and evaluated by the teaching staff.

During the Summer semester, first-year students are expected to be in the operating room between 6:00 am and 2:00 pm. During the Fall semester, first-year students are expected to be in the operating room between 6:00 am and 4:00 pm if no formal classes, lectures, or meetings are scheduled. During the Spring semester of the first-year and for all semesters of the second-year, students are expected to finish the daily caseload.¹⁴ When a case is interrupted by a required lecture or meeting, students should leave for the required lecture or meeting and return to the operating room afterwards to finish the caseload for the day.

Students are not dismissed from clinical duties until permission is received from that day's clinical instructor or the clinical coordinator, who is responsible for the student's clinical scheduling. No student is excused from clinical duties prior to 2:00 pm on any day without express permission from the site's clinical coordinator. Schedule conflicts may be accommodated upon approval of the local program director. Excessive late starts or early departures will result in dismissal from the Program.

On-Call Requirement

First year students are not permitted to have on-call responsibilities or to carry any on-call pagers.

For Cleveland Students

Second-year students may be required to have on-call responsibilities during the following rotations: Trauma, Pediatrics, Cardiac, Obstetrics, the S/CTICU, Neuro, and any general rotation site as determined by the site clinical coordinator.

On-call responsibilities for UH and Metro are for twenty-four (24) hours; they begin at 7:00 a.m. and end at 7:00 a.m. the following day unless otherwise specified. All call shifts must be approved by the Director of Clinical Education before the start of the call shift. Students are excused from clinical duties the day following a call shift (post-night call) only if they are present at the hospital after 10:00 p.m. and have received approval from the Director of Clinical Education. For example, if you are on call from 7:00 am on Sunday-7:00 am on Monday, you will not have to attend clinicals on Monday. If you are on call from 7:00 am on Sunday-10:00 pm on Sunday, you will be required to attend clinicals on Monday. Students will not receive post-night call on Monday if they take call on Friday or Saturday.

¹⁴ The caseload does not typically extend past 7:00 pm.

The clinical coordinator at each site is responsible for scheduling second-year students for on-call shifts. Second-year students are not permitted to carry "first call" pagers during their on-call shift.

For Houston Students

Second-year students may be required to have on-call responsibilities. The call is determined by the site clinical coordinator.

On-call responsibilities for Memorial Hermann Texas Medical Center are for twenty-four (24) hours; they begin at 7:00 a.m. and end at 7:00 a.m. the following day unless otherwise specified. Students are excused from clinical duties the day following a call shift (post-night call) only if they are present at the hospital after midnight. For example, if you are on call from 7:00 am on Sunday-7:00 am on Monday, you will not have to attend clinicals on Monday. If you are on call from 7:00 am on Sunday-10:00 pm on Sunday, you will be required to attend clinicals on Monday. Students will not receive post-night call on Monday if they take call on Friday or Saturday.

The clinical coordinator at each site is responsible for scheduling second-year students for on-call shifts. Second-year students are not permitted to carry "first call" pagers during their on-call shift.

For Washington Students

The on-call responsibilities of second-year students are determined by site clinical coordinators and vary for each clinical site.

On-Call Protocols

Protocol for on-call assignments are determined by the individual hospital, and may differ from site to site. On-call shifts could take place in the day, evenings, or overnight. Students may be required to cover a pager. When covering a pager, students may be required to stay at the hospital for the duration of their call or they may be allowed to take the pager off-site with them. Policies and protocols are determined by the hospital, and students should be aware of the facility's procedures in preparation for their first on-call assignment.

Typically, when students are scheduled for 24-hour call, they will be on-call from 7:00 am to 7:00 am the following day.¹⁵ Students will be off the day following their scheduled call day if they are at the hospital past midnight. For example, if a student is on-call from 7:00 am Thursday to 7:00 am Friday, then the student is off on Friday after 7:00 am and does not have to report to the operating room until Monday. Students are not off on Monday if they took call on Saturday; however, students are off on Monday if they take call on Sunday and are at the hospital past midnight.

Students will be expected to report to the operating room for clinical duties the following day if call duties do not keep them in the hospital past midnight.

Students will be scheduled individually for call per day per hospital.

¹⁵ In Cleveland, there is one exception. At UH, on-call schedules for Saturday and Sunday run from 7:30 am to 7:30 am the following day.

Students may not request a vacation day when they are assigned to take call once the call schedule is distributed. They will receive their on-call assignments as early as possible in the month, but scheduling difficulties may cause late distribution.

Clinical Performance Goals and Logging Clinical Case Data

All students are required to keep an accurate daily log of clinical activities in the case log systems, eAnesthesiology and e*Value. On a daily basis, students must enter their case information for review by the local program director. After 72 hours, if a student has not entered cases for a day when they were in the operating room, the system will give the student a failing grade of one (1) for that day. Each semester, students will meet individually with the local program director to review completed procedures and documented clinical cases.

Students are required to complete the minimum clinical standards, as listed below, by the end of the second year in order to be recommended for graduation. Students who have not satisfactorily completed the minimum clinical standards will face delayed graduation and may be required to complete up to one semester of clinical remediation in order to be recommended for graduation.

Clinical Case Log Policy

As noted above, the University permits individual departments and programs to set standards for graduation and separation that are above and beyond the minimums prescribed by the School of Graduate Studies. The following section applies to the case log and clinical evaluation systems used by the Master of Science in Anesthesia Program.

Logging Data

Logging data into the case log and evaluation systems used by the Master of Science in the Anesthesia Program is considered an exercise in the students' medical record keeping. For each clinical day, the student is responsible for entering:

1. **A clinical evaluation case log summary**, which includes but is not limited to the clinical experience date, clinical instructor, cases performed, and rotation experience.
2. **A full case log for each case performed in the case log system**, which includes but is not limited to the medical record number, patient age, ASA classification, procedure, attending physician, clinical instructor, surgery type and description, patient weight, patient position, procedures performed (such as IV, arterial line, NG tube, spinal, epidural, central line, pulmonary artery, endotracheal, endo-bronchial, and laryngeal mask placement) as well as any other pertinent information needed to track student progress and caseload.

The case log systems data entry is the students' responsibility. Accuracy and detail are paramount, as anesthesiologist assistants must maintain the highest level of documentation skills and accuracy. Case logging is one of the students' first opportunities to build the skills needed to accurately document medical procedures.

Documentation timeliness, accuracy, and integrity are absolute in the CAA profession and subsequently the timeliness, accuracy, and integrity of student case logs at Case Western Reserve University must be maintained.

Case Log Systems

The Program utilizes two case log systems, eAnesthesiology and e*Value. The systems fulfill separate functions for the Program. eAnesthesiology tracks student progress against the clinical standards, outlined in the following section. e*Value enables clinical instructors to submit evaluations of the student's clinical performance.

Case logs should be submitted in both systems for each clinical experience.

Case Log Timeliness

Students are responsible for entering case log summaries in the clinical evaluation system and full case logs in the case log system as outlined in the Logging Data section above. All case logs must be submitted in the system by the end of each scheduled clinical day. Grace periods of 24 hours for clinical evaluation case log summaries and 72 hours for full case logs are given to students to account for exceptional circumstances that may prevent a student from case logging by the end of the scheduled clinical day. If the student does not enter case logs in the clinical evaluation and case log systems within the periods of time outlined herein, it will be considered a "missed case log."

Missed Case Logs

Any students with a total of two (2) missed case logs in either the clinical evaluation system or the case log system within a single semester will be required to meet with the academic committee, and for each missed case log occurrence thereafter.

Any students with a total of three (3) missed case logs in either the clinical evaluation system or the case log system within a single semester may have their clinical experience course grade lowered by one (1) letter grade for that corresponding semester.

Any students with a total of four (4) missed case logs in either the clinical evaluation system or the case log system within a single semester may have their clinical experience course grade lowered by two (2) letter grades for that corresponding semester.

In addition to the letter grade penalties outlined above, students who miss three (3) or more case logs in either the clinical evaluation system or the case log system within a single semester may be subject to repeating the clinical experience course as outlined in the Graduation, Separation, and Academic Performance section of this manual.

Case Log Accuracy

Errors in case log entry will only be tolerated in the Summer semester of the first year in the Program. During that first semester, case logs will be audited, corrections made, and case log remediation given when needed.

Beyond the first semester in the program, the expectation is fully accurate case logs. Errors brought to the attention of the Program administration by the student will be afforded more leniency than those found by the Program in case log audits. The first instance will result in a written warning. Any instance following a written warning will result in action by the academic committee, and may result in separation from the Program. Repeated counseling and reprimands for case log errors is considered conduct unbecoming an MSA student.

Case Log Integrity

Any student suspected of falsifying case log data based on evidence discovered by Program

administration will be immediately suspended pending investigation. The student will be brought in front of the Progress and Promotions Committee to explain their case log data discrepancies. The committee will make one or more of the following recommendations based on information gathered during the investigation and presented at the meeting: (1) reinstatement, no reprimand; (2) reinstatement with reprimand; (3) reinstatement with reprimand and sanctions; and (4) referral to the University academic integrity board with a recommendation for separation from the University.

If the student is reinstated, they will be responsible for any make-up days while suspended during investigation and academic committee deliberation.

Clinical Standards

The minimum clinical requirements for a student to be eligible for graduation from the MSA Program for the 2020-2021 Academic Year are outlined on the next page.

Clinical competency is not determined by completing a specific number of skills. As such, the program director in consultation with senior clinical instructors may waive or extend specific skill requirements.

| Clinical Standards | | | | | |
|---------------------------------|--|-------------------------------|--------------------------------|----------------|-------------------------------|
| Total Anesthesia Cases | | | 650 | | |
| Total Direct Patient Care Hours | | | 2000 | | |
| Patient ASA Class III IV | | | 200 | | |
| Emergent/Trauma Cases | | | 25 | | |
| Ambulatory | | | 200 | | |
| Patient Population | Geriatric (65 + years) | | 150 | | |
| | Pediatric (0 - 18) | | 100 | | |
| Patient Position | Prone | | 25 | | |
| | Lithotomy | | 35 | | |
| | Lateral | | 25 | | |
| | Sitting | | 0 | | |
| | Supine | | 0 | | |
| | Trendelenburg | | 5 | | |
| | Reverse Trendelenburg | | 5 | | |
| | Left Uterine Displacement | | 5 | | |
| Beach Chair | | 2 | | | |
| Anatomical Location Surgery | Intracranial | | 10 | | |
| | Intrathoracic | Heart | 15 | | |
| | | Lung | 5 | | |
| | Intra Abdominal | | 75 | | |
| | Extremity | | 50 | | |
| | Other | | 0 | | |
| Head and Neck | | 25 | | | |
| Types of Surgery | Cardiac with CPB | | 10 | | |
| | Cardiac without CPB | | 0 | | |
| | Dental | | 5 | | |
| | ENT | | 10 | | |
| | GU | | 10 | | |
| | GYN | | 10 | | |
| | General | | 50 | | |
| | Neuro | | 10 | | |
| | OB Cases (Inc Deliv., C-Sect., Non-laboring) | | 25 | | |
| | Ophthalmology | | 5 | | |
| | Ortho | | 50 | | |
| | Out of OR | | 50 | | |
| | Plastics | | 10 | | |
| | Thoracic | | 5 | | |
| Vascular | | 15 | | | |
| Patient Population | General Anesthesia with advanced airway | | | 400 | |
| | General Anesthesia without advanced airway | | | 0 | |
| | Induction, Maintenance, & Emergence | Mask Induction | | 0 | |
| | | Mask Management (Entire Case) | Adult | 0 | |
| | | | Pediatric | 1 | |
| | | Laryngeal Mask Airways | Adult | 25 | |
| | | | Pediatric | 15 | |
| | | Tracheal Intubation | Oral Adult | 150 | |
| | | | Oral Pediatric | 25 | |
| | | | Nasal (Adult and/or Pediatric) | 10 | |
| | | Emergence from Anesthesia | | | 300 |
| | | Regional Techniques | Management | Administration | Spinal (Single Shot, not CSE) |
| | Epidural | | | | 10 |
| | Peripheral Nerve Block | | | | 0 |
| Pediatric Caudal | 0 | | | | |
| MAC | | | 10 | | |
| Arterial Techniques | Arterial Puncture/Catheter Insert | | 25 | | |
| | Intra-Arterial BP Monitoring | | 50 | | |
| Central Venous Presser Catheter | Placement | | 1 | | |
| | Monitoring | | 15 | | |
| Pulmonary Artery Catheter | Placement | | 0 | | |
| | Monitoring | | 0 | | |
| Other | Intravenous Catheter Placement | Adults | 50 | | |
| | | Pediatrics | 10 | | |
| | Nasogastric Tube Placement | | 5 | | |
| | Endobronchial Tube Placement | | 0 | | |
| | ERAS | | 0 | | |
| | ER | | 0 | | |
| | IR | | 0 | | |
| Endoscopy | | 0 | | | |
| Robotic | | 0 | | | |

The specific minimum requirements and all related information must be accurately documented in the case log systems described in the Case Log Policy section above as proof that the student has met the requirement and can be recommended for graduation.

Clinical Performance Goals

Each MSA student is expected to aspire to clinical excellence by attaining performance goals and standards set forth by the education committee. Successful completion of clinical goals should be measurable, thereby giving the student meaningful feedback concerning clinical performance.

Systematic acquisition of these clinical skills is monitored by a checklist of student achievement, which is supervised by clinical instructors. Completing the checklist is the responsibility of the student. A finished checklist is required to go on to the next level of clinical competence and to be successfully promoted to the next semester.

The following sections outline minimum standards for clinical performance at distinct intervals of training. A novice level of training should not limit participation in procedures or tasks that are considered more appropriate for advanced students. Demonstrated clinical excellence allows for participation in more complicated cases, including but not limited to pediatric, ASA III, and ASA IV cases. Subsequently, the student may work ahead toward completing the checklist, providing all applicable requirements are fulfilled by semester's end.

First Year: Basic Science, Summer Semester

By the end of the Summer semester, the first-year student should strive to be 70% successful when performing the following tasks with frequent assistance:²¹

1. **Venous cannulation and fluid therapy** on healthy adult patients.
2. **Airway management** on anesthetized, healthy adult patients.
3. **Laryngoscopy and endotracheal intubation** on anesthetized, healthy adult patients with Mallampati Class I or II airways.
4. **Timely and accurate completion of the intraoperative record with no blank spaces.**
5. **Anesthesia machine checkout and appropriate room setup** for healthy (ASA I & II) adult general anesthesia management.
6. **Placement of laryngeal mask airways (LMAs)** in healthy adult patients.

²⁰ Venous Access in IVs and Central Lines: For clinical skills to be successfully completed and recorded, venous blood return must occur.

²¹ Frequent assistance is defined as supervision 100% of the time and technical support 75% of the time given by a clinical instructor.

The performance checklist for the Summer semester also includes:

- 1. Successful placement of intravenous cannulas in adult patients given the following criteria:**
 - An appropriate vein and catheter size should be chosen.
 - The catheter must be inserted successfully by the second needle stick.
 - The field should be relatively blood-free during and after insertion.
 - Tubing connections should be tight with no blood or fluid leakage.
 - The fluid infusion should be run at an appropriate rate.
 - The work area should be cleaned as needed.
 - The patient's fluid deficit and a fluid replacement plan are calculated and presented.
 - The maximum allowable blood loss for the case is calculated and presented.

- 2. Successful completion of general anesthetics on healthy adult patients managed with mask assisted spontaneous respirations given the following criteria:**
 - An appropriate patient is chosen for mask maintenance.
 - An appropriate mask size is chosen.
 - Assisted spontaneous ventilation is achieved and managed.
 - Airway obstruction is recognized and appropriate maneuvers to correct are taken.
 - The student responds appropriately and promptly to changes in the patient's status (⊗BP, ⊗HR, ↓Sat, etc.).

- 3. Successful endotracheal intubation on healthy adult patients with Mallampati Class I or II airways given the following criteria:**
 - An appropriately sized OETT is chosen.
 - An appropriate style and size of blade is chosen.
 - The tube is atraumatically inserted by the second tube pass.
 - Tube placement and position is verified using at least two acceptable methods (breath sounds, capnography, etc.).
 - The tube is adequately secured to the patient in a timely fashion.
 - The transition to adequate mechanical ventilation is achieved.

- 4. Adequate completion of intraoperative records for uncomplicated cases given the following criteria:**
 - The record is neat and legible.
 - All drug therapy, patient intervention, vital signs, etc. are recorded accurately and completely.
 - The student keeps current with charting and does not lag behind.
 - No "blank spaces" inappropriately exist on the finished product.
 - The records are filed in the appropriate area postoperatively.
 - The student continues monitoring while charting.

- 5. Appropriate setup of the anesthesia machine and tabletop for healthy (ASA I & II) adult general anesthetics given the following criteria:**
 - Check for adequate suction.
 - Check O2 cylinder supply.
 - Check O2 pipeline supply.
 - Check vaporizer fill level.
 - Calibrate O2 monitor sensor to room air.
 - Check flowmeters
 - Install and check the patency of an appropriate breathing circuit.
 - Verify the CO2 absorber is adequate.
 - Verify the integrity of the APL valve and the scavenging system.
 - Test the integrity of the ventilator.

- Check the integrity of the monitors (capnograph, ECG, pulse oximeter, temperature probe, etc.)
 - Have appropriate emergency drugs available.
 - Have appropriate anesthetics and narcotics available.
 - Have appropriate airway equipment available.
 - Have appropriate intravenous therapy available.
- 6. Successful placement of laryngeal mask airways (LMAs) in healthy (ASA I & II) adult patients given the following criteria:**
- The LMA is placed without trauma to the teeth or pharynx.
 - No leak is present after the cuff is inflated.
 - The LMA is securely taped.
 - Assisted spontaneous ventilation is achieved and appropriately managed.

First Year: Basic Science, Fall Semester

By the end of the Fall semester, the first-year student should strive to be 80% successful when performing the following tasks with moderate assistance:²²

1. **Venous cannulation and fluid therapy** on healthy adult patients.
2. **Airway management** on anesthetized, healthy adult patients.
3. **Laryngoscopy and endotracheal intubation** on anesthetized, healthy adult patients with Mallampati Class I or II airways.
4. **Accurate completion of the intraoperative record with no blank spaces.**
5. **Anesthesia machine checkout and appropriate room setup** for healthy (ASA I & II) adult general anesthesia management.
6. **Placement of LMAs** in healthy adult patients.
7. **Closely supervised involvement with pediatric airway management and venous cannulation** in preparation for performance testing by the end of the first year.

The performance checklist for the Fall semester also includes, and correlates to the previously mentioned criteria in the preceding Summer semester checklist:

1. **Successful placement of intravenous cannulas with calculation of fluid deficit and replacement and maximum allowable blood loss** for healthy adult patients.
2. **Successful completion of general anesthetics on healthy adult patients managed with mask assisted spontaneous respirations.**
3. **Successful endotracheal intubations** on healthy adult patients with Mallampati Class I or II airways.
4. **Adequate completion of intraoperative records** for uncomplicated cases.
5. **Appropriate setup of the anesthesia machine and tabletop** for uncomplicated (ASA I & II) adult general anesthetics
6. **Successful placement of the laryngeal mask airways** in healthy adult patients.

²² Moderate assistance is defined as supervision 100% of the time with technical support 50% of the time given by a clinical instructor.

First Year: Basic Science, Spring Semester

By the end of the spring semester, the first year MSA student should strive to be 90% successful when performing the following tasks with minimal assistance:²³

1. **Venous cannulation and fluid therapy** on all adult and pediatric patients.
2. **Airway management on all awake and anesthetized, adult and pediatric patients.**
3. **Laryngoscopy and endotracheal intubation** on all anesthetized adult and pediatric patients.
4. **Anesthesia machine checkout and appropriate room setup** for all adult and pediatric general anesthesia management.
5. **Preoperative interview and physical examination, and subsequent development of the anesthetic plan in conjunction with the attending anesthesiologist and anesthesiologist or resident** for uncomplicated (ASA I & II) adult and pediatric patients.
6. **Placement of LMAs** in healthy pediatric patients.

The performance checklist for the Spring semester also includes, and correlates to the previously mentioned criteria in the preceding Summer semester checklist:

1. **Successful placement of intravenous cannulas** on healthy pediatric patients.
2. **Successful completion of general anesthetics on healthy pediatric patients managed with mask assisted spontaneous respirations.**
3. **Successful endotracheal intubations on healthy pediatric patients.**
4. **Appropriate setup of the anesthesia machine and tabletop** for healthy pediatric patients.
5. **Completed preoperative interviews and physical examinations on uncomplicated (ASA I & II) adult and pediatric patients given the following criteria:**
 - Complete review of all physiologic systems by patient interview and review of old and current chart including previous medical history, history of present illness, current vital statistics, blood chemistries, diagnostic tests, and pertinent medical consultations.
 - Physical examination of the patient focusing on the lungs, heart, and airway.
 - Patient interview focusing on NPO status, drug allergies, previous surgeries noting anesthetic complications, family history of anesthetic complications and current pharmaceutical therapies.
 - Thorough discussion of the anesthetic options including risks and benefits for each option.
 - Development of the anesthetic plan in conjunction with the attending anesthesiologist, anesthesiologist, and resident.
6. **Successful placement of LMAs in healthy pediatric patients.**

Second Year: Clinical, All Semesters

By the end of the spring semester of the second year, having completed the entire didactic and clinical course of study, the MSA graduate should be at least 95% successful when performing all of

²³ Minimal assistant is defined as supervision 100% of the time with technical support 10% of the time given by a clinical instructor.

the previously mentioned tasks in addition to the following tasks with rare assistance:²⁴

1. Arterial vessel cannulation.
2. Central venous cannulation.
3. Lumbar epidural catheter placement and management.
4. Placement and management of pediatric caudal blocks.
5. Placement and management of IV perfusion (Bier) blocks.
6. Nasotracheal intubation.
7. Endobronchial tube placement.
8. Nasogastric tube placement.
9. Management of monitored anesthesia care (MAC).
10. Management of anesthesia for outpatient surgery.
11. Management of anesthesia for cardiac surgery.
12. Management of anesthesia for thoracic surgery.
13. Management of anesthesia for obstetrics.
14. Management of anesthesia for pediatric surgery.
15. Management of anesthesia for neurosurgery.
16. Management of anesthesia for trauma surgery.
17. Management of anesthesia for vascular surgery.
18. Management of anesthesia for geriatric patients.

The performance checklist for the entire clinical (second) year contains the following items:

1. **Successful placement of arterial catheters by the second needle stick given the following criteria:**
 - An appropriate vessel is chosen for insertion.
 - An appropriate catheter is chosen.
 - Aseptic technique is used.
 - The transducer tubing is connected with minimal blood loss.
 - The catheter and tubing are secured adequately.
 - The transducer is zeroed properly.
2. **Successful placement of subclavian or internal jugular central venous catheters by the second needle stick given the following criteria:**
 - An appropriate vessel is chosen.
 - An appropriate catheter is chosen.
 - Aseptic technique is used.
 - Tubing is connected with minimal blood loss.
 - The catheter and tubing are secured properly.
 - The transducer is zeroed properly (when appropriate).
 - The Swan-Ganz catheter is inserted properly (when appropriate).
3. **Successful placement of lumbar epidural catheters by the second Touhy needle stick given the following criteria:**
 - Aseptic technique is used.
 - The appropriate level for insertion is chosen.

²⁴ Rare assistance is defined as supervision 100% of the time with technical support 5% of the time given by a clinical instructor.

- The dura is not punctured.
 - No persistent paresthesia is elicited.
 - An appropriate local anesthetic/dosage is chosen.
 - No intravascular injection is evident.
 - The level of analgesia is deemed adequate.
 - Follow up management of the block is appropriate.
- 4. Successful placement of pediatric caudal blocks by the second needle stick given the following criteria:**
- Aseptic technique is used.
 - No CSF, heme blood or stool is aspirated.
 - An appropriate local anesthetic/dosage & volume is chosen.
 - An adequate level of analgesia is obtained.
- 5. Successful placement of intravenous perfusion (Bier) blocks given the following criteria:**
- Standard practice is followed.
 - Adequate surgical analgesia is achieved without the need for follow up general anesthesia.
- 6. Successful placement of adult or pediatric nasotracheal tubes by the second tube pass given the following criteria:**
- An appropriately sized endotracheal tube is chosen.
 - Magill forceps are used effectively when needed.
 - Tube insertion is atraumatic.
 - No epistaxis is noted.
 - The tube is secured adequately.
- 7. Successful placement of endobronchial tubes by the second tube pass given the following criteria:**
- An appropriately sized tube is chosen.
 - Proper tube placement is verified by fiberoptic endoscopy.
 - The tube is secured adequately.
 - The student shows a working knowledge of endobronchial tube ventilation principles.
- 8. Successful placement of nasogastric tubes by the second tube pass given the following criteria:**
- The appropriate size tube is chosen.
 - The appropriate nares is chosen.
 - No epistaxis is noted.
 - The tube is secured adequately at the appropriate depth.
- 9. Anesthetic management of patients for monitored anesthesia care as a member of an anesthesia care team.**
- 10. Anesthetic management of patients as a member of the anesthesia care team for the following specialty surgeries:**
- Cardiac
 - Neurosurgery
 - Outpatient

- Thoracic
- Trauma
- Vascular

11. Anesthetic management of pediatric patients²⁵ for all types of surgery as a member of an anesthesia care team.

12. Anesthetic management of geriatric patients²⁶ for all types of surgery as a member of an anesthesia care team.

13. Anesthetic management of patients for obstetrical procedures as a member of an anesthesia care team given the following criteria:

- Vaginal deliveries, including: (1) placement of epidural; (2) management of labor; and (3) present for delivery.
- Cesarean sections, including: (1) placement of epidural and induction of general anesthesia, and (2) management of the case

Student Clinical Performance Evaluation

Overview

Feedback from clinical instructors is vital to the education of the students as well as to the maintenance of a quality program. During rotations, clinical instructors are asked daily to complete an evaluation that coincides with the student's level of education in anesthesia. The completion of these evaluations is vital to grading accuracy. All students are required to enter their case information into the case log systems daily, as noted in the Case Log Policy section above. Upon completion, these forms are reviewed carefully and used to calculate semester grades, evaluate program curriculum, and signal any distinguished performance or difficult areas for students.

Online Evaluation Process

The online evaluation system, e*Value, allows instructors to complete and submit evaluations for students from any computer or mobile device that is connected to the internet. Instructors will receive an email prompt to complete an evaluation for the student after the student has logged the case in the system. The email will contain a link, which will take the instructor to the evaluation website. The instructor may also go directly to the evaluation web site instead of waiting for an email prompt.

In order to be graded and to receive credit for the case logs, the student must:

- Enter their case logs at the end of each clinical day.
- Enter all data accurately. Case logs cannot be edited by the student after they are entered and saved. Students must submit the correct clinical date and the name of their instructor. The system is designed to guide users as they enter their case logs; pay close attention to the prompts and warnings on the screen. Errors or missed case log entries are subject to the penalties outlined in the Case Log Policy section above.

²⁵ Patients included in this category can also be counted toward requirements in other categories.

²⁶ Patients included in this category can also be counted toward requirements in other categories.

Scoring and Grading

Students are expected to achieve 95% success when performing a task with rare assistance. When these conditions are met, students should expect to receive an evaluation score of "3" or above.

The evaluation scores are entered into a program that averages them daily, weekly, and over the semester per category and holistically. Evaluation comments are regularly reviewed by the local program director, and these evaluations are used to calculate 60% of the clinical grade.²⁷ Both negative and positive comments are considered by the program. The semester average is weighted with the comments and the results of the clinical comprehensive examinations, which yields the final semester grade.

Items on each evaluation are scored on a scale for 1 to 5, with the scale described as follows:

- N/A = not applicable to the case;
- 1 = unacceptable performance;
- 2 = performed below expectations;
- 3 = met expectations;
- 4 = exceeded expectations;
- 5 = exemplary performance.

Students may view their non-confidential²⁸ clinical evaluations at any time online via e*Value and may request a meeting with the local program director to discuss their evaluations at any time, though students are formally presented with the information mid-semester in meetings with their faculty advisor and at the end of the semester in reviews with the local program director. A selection of evaluations can be found in the appendix.

It is imperative that an evaluation is completed each day a student is assigned to the operating room. Grades are determined by completed evaluations and are averaged weekly. The averages correspond to a letter grade, as follows:

- **A:** 4.00 to 5.00
- **B:** 3.00 to 3.99
- **C:** 2.00 to 2.99
- **F:** 0.80 to 1.99

Reviews

Students are counseled mid-semester in meetings with their faculty advisor, and at the end of the semester in reviews with the local program director. The purpose of these reviews is to track progress of the attainment of the clinical performance goals, as outlined in the above section. Clinical rotations and specific requirements are adjusted as needed if circumstances dictate a change. Students are encouraged to keep the clinical coordinators informed of potential problems with meeting goals so that these issues can be rectified expeditiously.

²⁷ It is the responsibility of the clinical coordinator to familiarize the clinical instructors with the evaluation process. Items on the evaluation are scored on a scale for 1 to 5, with the scale described as follows: N/A = not applicable to the case; 1 = unacceptable performance; 2 = performed below expectations; 3 = met expectations; 4 = exceeded expectations; and 5 = exemplary performance.

²⁸ All evaluations scored with a 1 or 5 require a confidential comment to be entered by the clinical instructor and, thus, will not be available for view by the student.

The student will not proceed to the next level of clinical competence until the clinical performance requirements for each semester are satisfactorily met.

Pregnancy Termination Disclaimer

Students in the Master of Science in Anesthesia Program may be assigned to clinical cases in which pregnancy terminations are being performed by the surgical team.

There are two types of pregnancy terminations: therapeutic and elective. Therapeutic terminations are performed for maternal health reasons or for fetal anomalies that may or may not be life threatening. Elective terminations are those initiated by personal choice. Laws governing pregnancy terminations differ by state, and policies may differ from hospital to hospital.

Students are given the opportunity to state what they are or are not willing to participate in by completing the Pregnancy Termination Survey at the time of orientation, and will be assigned to cases accordingly. Students who do not complete the form will be expected to participate in all types of pregnancy terminations.

Additional Student Policies

The MSA Program expects and encourages students to achieve their best in the classroom and in clinical settings. Students must recognize that they are junior colleagues of their clinical instructors, and must act under the supervision of the faculty physicians, residents, and certified anesthesiologist assistants at all times.

Program Goals and Learning Domains

An advisory committee assists the MSA Program in formulating appropriate goals and learning domains. The advisory committee is comprised of representatives from the communities of interest including students, graduates, faculty, CAAs, physicians, program and hospital administration, employers, clinical preceptors, clinical rotation sites, and the public.

Program Goals

The overarching goal of the MSA Network are:

- To prepare competent entry-level anesthesiologists in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains.

Learning Domains

The learning domains of the MSA Program are the core competencies of the curriculum, defined by the Accreditation Council for Graduate Medical Education (ACGME) and including:

- **Patient care** that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.
- **Medical knowledge** about established and evolving biomedical, clinical, and cognate (e.g. epidemiological and social-behavioral) sciences and the application of this knowledge to patient care.
- **Practice-Based learning and improvement (PBLI)** that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, and improvements in patient care.
- **Interpersonal and communication skills** that result in effective information exchange and teaming with patients, their families, and other health professionals.
- **Professionalism**, as manifested through a commitment to carrying out professional responsibilities, advocacy, adherence to ethical principles, and sensitivity to a diverse patient population.
- **Systems-Based practice**, as manifested by actions that demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value.

Student Code of Conduct

MSA students and faculty are committed to the study of anesthesia and the development and maintenance of a high sense of integrity. For students, it is important to realize that your career as an anesthesiologist assistant begins on the first day of your graduate coursework. An exemplary professional reputation will be an asset for each student and for the Program. Students' conduct and appearance should reflect a dedication to professionalism and concern for patients and coworkers.

The anesthesiologist assistant, in all professional relationships, practices with compassion and respect for the inherent dignity, worth, and uniqueness of every individual, unrestricted by considerations of social or economic status, personal attributes, or the nature of health problems. Students must adhere to strict confidentiality with regard to all patient contact.

Code of Medical Ethics

To the extent it is applicable, all MSA students must abide by the Code of Medical Ethics adopted by the American Medical Association. The Code of Medical Ethics is available at <http://www.ama-assn.org/ama/pub/physician-resources/medical-ethics/code-medical-ethics.page>

University Standards of Conduct

All members of the University community, including MSA students, are subject to the University Standards of Conduct. This is a general code designed to reaffirm the civil, personal and property rights of the University and its members. These standards are included in the CWRU Student Handbook at <https://students.case.edu/policy/conduct/>.

Social Media Policy

It is the duty of all MSA students and future certified anesthesiologist assistants to uphold the standards of the Program, the University, and the profession beyond the classroom and the operating room, including on the internet. All MSA students will be held personally responsible for the content they publish online.

Students may not demean or degrade any individual associated with the University on any social media platform. This includes, but is not limited to, inappropriate or offensive postings, publications, or comments of sexism, racism, obscenity, and libel on platforms including, but not limited to, Facebook, Twitter, Instagram, SnapChat, YouTube, personal blogs, and social news networking sites.

Students may not post any sensitive information, PHI, or patient encounters on any personal website, media-share site, or social networking site. Removal of an individual or patient's name is not proper de-identification.

Any violation of this social media policy may result in disciplinary action at the discretion of program administration. Depending on the circumstances involved, the MSA Program may impose any of the University disciplinary sanctions, up to and including dismissal, as described at <https://students.case.edu/handbook/judicial/university/sanctions.html>.

Adherence to professional standards of conduct and behavior throughout the course of study and in all Program activities is a requisite for graduation.

Student Responsibilities

MSA students are expected to abide by all the network-wide and location-specific policies, and may face dismissal from a rotation or from the Program for noncompliance.

Students must not identify themselves as a certified anesthesiologist assistant or any other healthcare professional other than an anesthesiologist assistant student. Students must wear their CWRU identification badge during all clinical encounters, in addition to any identification badges required by their rotation site. Students should not leave the hospital grounds wearing or carrying operating room apparel, including scrubs.

Students are responsible for completing clinical instructor evaluations in a timely manner.

Students are responsible for timely, accurate documentation of clinical cases in the case log systems. Students should make every effort to enter their case logs the same day.

Students are responsible for turning in all paperwork related to time-off requests and elective satellite rotations.

Registration

Registration for all MSA coursework will be accessible through the Student Information System (SIS).

The MSA Program will notify students when it is time to register for classes, and will provide information and instructions. Students should not register until they receive instructions from the Program. MSA courses are available to MSA students exclusively; all students will be able to register for classes.

The MSA Program sets the deadline for registration each semester, and does not follow the University's academic calendar or registration deadlines. All students must be registered for their courses before the first day of classes each semester. Students may attend only those classes for which they have officially registered.

Holds

There are various holds, including financial holds due to past-due balances, that can be applied to a student's record that may prevent registration in SIS. Students will not be able to register for classes if holds have been applied. Students must resolve the issue directly with the Bursar's Office before the start of the semester.

Our Learning Environments

CWRU faculty and staff are working diligently to provide courses in modalities that will enable all students to continue to move toward completing their degree and achieving their academic goals. Regardless of the learning environment, the tuition and fees will be the same. The tuition and fees are in exchange for learning, academic credit, and certain non-academic services that will be provided whether in person, in a hybrid environment, or entirely remotely, and tuition and fee amounts will remain the same in the event the mode of course delivery changes during the semester.

Health Insurance Policy

All Case Western Reserve University students who are enrolled in one or more credit hours are required to have health insurance during their time at CWRU. All MSA students are automatically enrolled in CWRU's Student Medical Plan and the fee is placed on the student's tuition account. However, if you currently have health insurance coverage comparable to the Student Medical Plan, you may elect to waive this fee. Comparable personal insurance must meet the waiver criteria outlined at <https://students.case.edu/wellness/medicalplan/waiver/criteria.html>.

Students with comparable personal insurance must complete the waiver process. More information on the process can be found at <https://students.case.edu/wellness/medicalplan/waiver/>.

All waivers are subject to audit by Case Western Reserve University & Aetna Student Health. Any student's plan found to not meet the requirements will be charged for the Student Health Insurance Plan. Effective as of Fall Semester 2016, students who waive the CWRU Student Medical Plan fee will be waiving for the full academic year, as opposed to being required to waive two times during the academic year.

Neither the MSA Program nor the University will cover any cost associated with illness, accident, or injury incurred in the clinical education setting.

Tuberculosis Test, Influenza Vaccine, and Other Required Immunizations

All students are required to obtain a tuberculosis (TB) screening and an influenza vaccine each year of enrollment in the MSA Program. Additional instructions for submitting vaccination records and required immunizations will be provided for first-year students in their welcome packet.

For Cleveland Students

The TB screening and flu shot are offered free of charge through the University Health Service. Flu shots for the current year are made available in October.

For Houston Students

The TB screening and flu shot are offered free of charge through University of Texas Health Center, which is located on the first floor of the UT Professional Building. Flu shots for the current year are made available in October.

For Washington Students

TB screening and flu shots are available at local pharmacies. Coordinate with your health insurance provider on how to access these services locally.

All tests or vaccinations required by Case Western Reserve University or by mandatory or elective rotation sites are the financial responsibility of the student.

Pregnancy While in the Program

The MSA Program will work with any student who may become pregnant while in the Program to ensure she is able to complete the course of study.

If a student becomes pregnant while in the MSA Program, it is imperative that she informs the local program director immediately so that the necessary precautions may be taken to assure her safety and the safety of her child in the clinical setting.

Consensual Relationships Policy

To ensure the Case Western Reserve University Master of Science in Anesthesia Program is maintaining ethical standards, we require all students, faculty, and staff to disclose any consensual relationships that may be established between two members of our community. This may include but is not limited to relationships between: students, students and instructors, instructors, faculty and staff.

A consensual relationship is one that is romantic, intimate, or sexual in nature and to which both parties consent and which is currently ongoing.

All students, faculty, staff, and clinical instructors are required to complete the Management of Consensual Relationship Compliance Form even if you have nothing to report.

Any future change in your status relating to consensual relationships must be reported to the local program office immediately so that an appropriate plan can be established to manage the professional relationship.

Work Policy

The MSA Program is designed exclusively for full-time study. Due to the intensive nature of the Program, students are strongly advised against holding employment while completing the first year of the Program.

Employment during the second year is prohibited.

Drug and Alcohol Policy

Students in the MSA Program must be knowledgeable about and adhere to federal, state, and local laws regarding alcohol and illegal drug use as well as the alcohol and drug policies of Case Western Reserve University, as set forth in the Case Western Reserve University Policies, available for review at <http://students.case.edu/handbook/policy/substances/>.

Due to the nature of anesthesia practice, the safety and well-being of patients is every practitioner's first and foremost concern. To this end, physical or mental impairment due to drug or alcohol abuse will not be tolerated. Any student found to be in violation of federal law, state law, local law, or University policy is subject to internal discipline or referral to the appropriate authorities for legal prosecution. Further, it is against program policy to possess or consume marijuana, including medical

marijuana or any of its derivatives (such as CBD oil), while in the program, regardless of current local state or municipal laws. Depending on the circumstances involved, the MSA Program may impose any of the University disciplinary sanctions listed in the CWRU Policies, up to and including dismissal. A full list of sanctions is available at <https://students.case.edu/handbook/judicial/university/sanctions.html>.

MSA students must undertake a standard 10-panel drug screen prior to admission and will be subjected to random drug testing, including fentanyl and alcohol, throughout their enrollment in the Program, as outlined in the Authorization for Random Drug Testing and Release of Drug Test Results. Students who are suspected of drug use or a policy violation will also be subject to drug and alcohol testing. Certain clinical rotation sites may require an additional drug screen prior to beginning their rotation; if these are elective rotations, the cost of the additional screen will be borne by the student.

Professional Appearance Policy

MSA students will adhere to the professional appearance policy listed below:

- No jeans, shorts, t-shirt, tank tops, halter tops, sandals or open-toe shoes
- No athletic wear, graphic tees, clothing with inappropriate content or messages
- No hats or bandanas
- No large jewelry, tattoos, piercings (except in the ear)
- No personal headphones or earbuds

The professional appearance policy supersedes all rotation site policies unless the rotation site policy is more restrictive than the aforementioned policies. It is expected that while students are in any patient contact area including preop, postop/PACU, the OR, or any additional patient area, students will abide by this policy. This policy will remain in effect when on the premises of Case Western Reserve University, at any of the affiliated rotation sites, and while participating in any program-sanctioned educational or social event.

Full OR scrub apparel is also required when participating in learning activities in the simulation laboratory.

Licensure and Employment Disclaimer

The Master of Science in Anesthesia Program's sole purpose is to train competent and compassionate anesthetists. While the course of study is designed to support preparation for the certifying exam, the Program does not guarantee that students will pass the exam, obtain professional licensure, or maintain licensure.

Furthermore, while the Program supports networking and job search opportunities and assists in finding employment for graduates, the Program does not guarantee that graduates will be employed upon or after graduation.

If admitted, a prior felony conviction may restrict a student's ability to obtain or disqualify a student from obtaining professional licensure or employment.

Clinical Instructor and Preceptor Policy

There is a designated clinical coordinator at each site to orient the student to the affiliate hospital policies and procedures, including such items as lockers, scrubs, and parking. This contact also serves as an impartial resource if the student should also require assistance with a conflict.

In the OR, the student may be assigned to an individual or several clinical instructors over the course of the rotation. Clinical instructors are defined as a licensed physician who has completed a residency in anesthesiology, senior anesthesiology residents, certified anesthesiologist assistants, and certified registered nurse anesthetists. A clinical instructor must be immediately available to monitor the student at all times. At no time is a student to be without 1:1 pairing with a clinical instructor.

Clinical Instructor Evaluations

Students are asked to complete clinical instructor performance evaluations daily for each instructor they are paired with in the operating room. The evaluations can be completed online in eAnesthesiology.

These evaluations provide feedback regarding the effectiveness of the instruction and the rotation. Data from these reports are required for ARC-AA accreditation.

MSA administrators will complete aggregate reports of all clinical instructor performance evaluations by hospital. These reports are reviewed internally and shared with the head of the respective anesthesiology department annually to ensure effectiveness.

Policies Specific to Second-Year Students

Rotation Schedule

Second-year MSA students are expected to complete eight (8) rotations in specialty areas at specific hospitals. Specialties include Pediatrics, Trauma, OB, Neuro, Cardiac, Outpatient, Block, and ICU. These dates, corresponding specialties, and clinical sites are listed on the rotation schedule.

In a specialty rotation, the majority (more than 60%) of cases assigned to a student should be in the specialty. For example, if a student has a cardiac rotation, it is expected that at least 6 out of 10 assigned cases will be cardiac. The cases should also reflect a degree of difficulty that is consistent with the student's level of experience. General rotations, in contrast, should consist of a good mix of all the specialties.

The second-year rotation schedule will be developed in a manner that best fits the needs of the student, Program, and clinical sites. Program and clinical site adjustments may require alterations in the second-year rotation schedule. The Program will make every effort to inform those affected in a timely manner and will make adjustments that permit a student to complete all required rotations for graduation.

Rotation Hours

MSA students are expected to arrive early enough that the room is completely set up and the patient is seen before the scheduled start time of the first case of the day, Monday through Friday. The student should finish all scheduled cases for the day.

The student is expected to adhere to the work schedule of the affiliate hospital and attend any lectures expected of its staff. When students are on in-town rotations, they are excused from affiliate hospital hours when an MSA Program lecture or conference is scheduled.

For Cleveland Students

Standing MSA Program conferences include Wednesday Morning Conference from 7:00 am to 8:00 am on Wednesdays as scheduled by University Hospitals Cleveland Medical Center. For ANES 468 and 470, refer to the course syllabi for dates of scheduled lectures and conferences.

For Washington Students

Refer to the course syllabi for dates of scheduled lectures or conferences.

The dates and times of standing conferences are subject to change, and will be communicated locally.

Clinical coordinators will be notified of other schedule conflicts. Cleveland, Houston, and Washington students completing out-of-town rotations will be required to attend all standing conferences, and should follow location-specific directions for accessing the conference. Attendance is mandatory.

Livestream of ANES 468 and 470

Students are required to attend and participate in ANES 468 and 470. For students rotating out of town or unable to get to campus, livestream is available.

For Cleveland Students

For ANES 468 and 470, the livestream can be accessed at <http://case.edu/livestream/som-aa/>.

On this page, to the right of the video, is a chat box. Online attendees must sign-in here by entering their first and last name to receive credit for attending the presentation; please sign-out of the stream using the same process at the end of the presentation. The chat is also available for attendees to enter comments or ask questions that will be relayed to the presenter.

Students must use an electronic device to watch the presentation. The device should have Flash Player 10.0 or newer installed. Internet Explorer or Safari is recommended; Google Chrome also supports the livestream. MediaVision recommends 1MB of bandwidth for viewing the presentation, and students are encouraged to log into the VPN for greater bandwidth. Students should not use the internet to check email or browse while attending the case presentations; this will disrupt the stream and prevent the student from following along. Students can use public computers at a local library if they do not have access to a personal computer.

For Houston Students

For ANES 468 and 470, the livestream will be made accessible via Zoom and the appropriate link will be distributed by the local program.

For Washington Students

For ANES 468 and 470, most lectures or conferences will be made accessible as links to Zoom recordings.

In the event that a student runs into unforeseen problems, they may call in to the local MSA Office for assistance.

Elective Satellite Rotations

Students may complete the permitted number of elective satellite rotations for their location of study. Students may choose external general rotations from the network list or propose an external clinical site. Satellite rotations are defined as any rotations outside of those listed on the Clinical Rotation Schedule, starting with Rotation 2. These elective rotations must be scheduled during one of the possible elective rotations, and will only be completed in place of a general rotation.

To request an elective satellite rotation, students must first receive prior approval from the local program director. Students should follow all steps for proposing an elective satellite rotation as outlined in the Network Guidelines for Satellite Rotation Proposals, which is provided to students upon request and included in the Appendix.

The process for proposing a satellite rotation site may take several months, and students should follow the timeline outlined in the Network Guidelines for Satellite Rotation Proposals for their location of study. If an MSA student or proposed satellite rotation site fails to complete all necessary steps and paperwork within the timeframe, then the request for an elective satellite rotation will be null and void.

To complete the request, personal information regarding the student may be required by the elective satellite rotation site. The program's ability to release a student's personal information is granted by the student in the first year, when they complete and return the Release of Information form included in the Forms section below.

All MSA policies apply during an elective satellite rotation.

Students from Houston or Washington that wish to complete an elective rotation in Ohio will need to have fingerprints on file with the program, conducted at their own cost.

If a student was promoted with reservations, then the student will need to complete all rotations at their location of study until approved to rotate out-of-town by the local program director.

Policies Specific to Cleveland Students

Additional On-Call Protocols

Cleveland students will not be excused from Wednesday Case Presentations or the Ethics, Diversity and Law for Anesthesiologist Assistants course for on-call or post-call reasons. Attendance is mandatory at these conferences and lectures regardless of call responsibilities.

Attendance at Wednesday Morning Conference is also mandatory if the student is on call at University Hospitals the night before. However, students do not have to attend Wednesday Morning Conference if they are on call at MetroHealth the night before.

On-Call Responsibilities by Specialty

| For Cleveland Second-Year Students | |
|---|--|
| Trauma | Call will be taken at Metro or UHCMC. Specifics will be explained by the clinical coordinator. |
| OB | Call will be taken at UH during the last two weeks of your rotation. Depending on your procedural counts, you may be required to take call on a Friday or Saturday. If your counts are high, you will be able to take call on other days of the week. |
| SICU/CTICU | The ICU rotator will also take call for liver transplants during their rotation. What this means is that if a big liver case comes in you will be paged and expected to show up to work the case. If the case continues past midnight you will have the following day off. |
| Neuro | Call will be taken at UHCMC and is taken once per rotation. You will be notified of your call schedule by the clinical site coordinator. |

Policies Specific to Washington Students

Time-Off Allowance Overview

As stated in the Attendance Policy for Didactic, Clinical Didactic, and Clinical Courses section, a student in good academic standing will be granted a total of six (6) vacation days in the first year and fifteen (15) vacation days in the second year. Unused vacation days may not be carried over from the first year to the second year.

For MSAS I in Washington, four (4) of the six (6) days off are allotted to the summer and fall semesters and two (2) of the six (6) days off are allotted to the spring semester. No remaining days may be carried over from the summer and fall semesters to the spring semester.

MSAS II in Washington are limited to five (5) total days off for any monthly general rotation. This includes but is not limited to program holidays, clinical site holidays, interview days, illness, and scheduled time-off.

Scheduled and Unscheduled Time-Off Requests

For MSAS I and MSAS II in Washington, refer to course syllabi for more information on scheduled and unscheduled time off policies.

Additional Policies Applying to Clinical Experience

Students must arrive at least 60 minutes before their scheduled start time to begin their clinical training unless instructed otherwise by the clinical instructor, clinical site coordinator, clinical director, or program director.

Students must follow the clinical requirements set forth by each clinical site in addition to the network and local program policies. Clinical requirements at each clinical site may include but are not limited to following hospital and department protocols, presenting at department conferences, leading journal clubs, emailing or calling clinical instructors the day before to discuss anesthetic plans, taking night or weekend calls, arriving at specific times, or performing specific responsibilities.

For additional program policies applying to clinical experiences, refer to the Anesthesia Clinical Experience course syllabi.

Appendix

Admission Policies

The mission of the Master of Science in Anesthesia Program is to graduate skilled and compassionate anesthetists. The admission policy reflects this goal. Applicants are considered on a variety of parameters that measure academic ability, interpersonal skills, clinical aptitude, and qualities such as professionalism, empathy, and leadership ability. It does so without regard to race, religion, age, sex, color, sexual orientation, national or ethnic origin, or political affiliation.

Admissions Requirements

Admission to the MSA Program requires that the following criteria are met.

1. Bachelor's degree from an accredited college or university

Applicants for admission must complete a course of study leading to a baccalaureate degree at an accredited United States, U.S. territory, or Canadian college or university, or its equivalent, prior to matriculation.

2. Prerequisite courses

Documentation of each of the prerequisites having been completed with a grade of B- or higher at an accredited United States, U.S. territory, or Canadian institution of higher learning is required. Prerequisites must be taken within five years of the application deadline. For those courses that have been repeated, the highest grade will be used in the calculation.

Prerequisites include:

- **one semester of biochemistry:** advanced course preferred. Bioengineering courses will not fulfill this requirement.
- **one year of biology with laboratory*:** a year-long biology course sequence with lab that stresses general concepts required. Bioengineering courses as well as courses in micro- or molecular biology, cellular biology, genetics and histology will not fulfill this requirement.
- **one semester of human anatomy with laboratory:** advanced course preferred. Courses in vertebrate embryology and developmental anatomy will not fulfill this requirement.
- **one semester of human physiology:** advanced course preferred. Courses in mammalian physiology and embryology will not fulfill this requirement.
- **one year of chemistry with laboratory*:** a year-long course sequence in general chemistry with lab required.
- **one year of organic chemistry with laboratory*:** a year-long course sequence in organic chemistry with lab required.
- **one year of physics with laboratory*:** a year-long course sequence in general physics with lab required.
- **one semester of calculus*:** precalculus will not fulfill this requirement.
- **one semester of advanced statistics*:** preferably for the life sciences. Introductory or basic courses will not fulfill this requirement.
- **one semester of English with expository writing*:** can also be fulfilled with other expository writing courses in the humanities. Science courses with extensive writing components can fulfill this requirement as well.

* Courses marked with an asterisk that were completed with a grade of B- or higher in excess of five years prior to the application deadline will meet the prerequisite criteria only if the MCAT composite score is 500 or higher. A high MCAT score indicates your knowledge of the coursework is still current, and we do not ask that you retake your older coursework.

Notes on Prerequisites

Substitutions are not permitted, and survey courses for non-science majors are not acceptable. Online prerequisite courses are also not acceptable.

The program will accept Advanced Placement (AP) exam credit for a prerequisite course if the applicant received a score of 4 or 5 on the exam and a grade of B- or higher in their high school AP class. If an applicant wishes to use AP exam credit to fulfill a prerequisite course, the MSA Program requires that the applicant submit their AP Score Report and high school transcript in the Documents page of CASAA.

A one-semester course in human anatomy and physiology with lab will fulfill both human anatomy with lab and human physiology prerequisites. You may take these two prerequisites separately or combined. These are the only two prerequisites that may be combined.

If a lab was included in a course but is not listed on your transcript, you must provide proof that the lab was completed. An official course description from your institution's website showing that a lab was included with the course will be sufficient. You can upload lab backup on the Documents page in CASAA.

All admission requirements must be completed satisfactorily before matriculation. In addition to inclusion here, the admission requirements are distributed in program literature and are viewable online at <https://case.edu/medicine/msa-program/admissions>.

3. Admissions Test

If the applicant has taken the Medical College Admissions Test (MCAT), then they must earn a minimum composite score of 493 on the MCAT. The test must be taken within three years of the application deadline.

If the applicant has taken the Graduate Record Examination (GRE), then they must earn a minimum score of 153 in Verbal Reasoning, 156 in Quantitative Reasoning, and 4.0 in Analytical Writing. The test must be taken within five years of the application deadline.

When an applicant has taken the MCAT or GRE more than once, component scores will not be combined. If an applicant has taken both admissions tests, they should submit both official scores for review.

4. CASPer Test

Applicants must complete the Computer-Based Assessment for Sampling Personal Characteristics, or CASPer test, for their application to be considered complete. CASPer is an online assessment that can only be taken once per cycle. The scores are valid for one year. There is no minimum score required, but successful completion of CASPer is required in order to maintain admission eligibility.

The program recommends taking CASPer before or concurrently with the submission of your application materials so that the scores will be received in a timely manner. CASPer reports scores directly to the program, approximately three weeks after the test date. Your application will not be considered complete until all components of the CASAA application and your CASPer results have been received.

International Admissions Requirements

Applicants with international undergraduate, graduate, or advanced degrees must meet the standard admission requirements, including the necessary prerequisite courses, outlined above and obtained from an accredited United States, U.S. territory, or Canadian college or university, and the admissions test.

No exceptions will be made for required prerequisite coursework or the admissions test, regardless of degrees or certification received outside the United States or Canada, prior experience, work background, or education.

International students must also submit:

1. **An Education Credential Evaluation and Authentication Report for foreign transcripts:** the report is required in order to verify that the international degree earned is equivalent to a bachelor's degree received at a United States, U.S. territory or Canadian college or university.
2. **Language test scores:** international students whose first language is not English must demonstrate English proficiency by taking the IELTS, PTE, or TOEFL. Scores are valid for two years from the date of the test, and the minimum scores required are:
 - IELTS: 7.0
 - PTE-Academic: 61
 - TOEFL (internet-based): 90
 - TOEFL (paper-based): 577

The language test requirement will be waived if you have earned a bachelor's or master's degree from an institution where English is the primary language of instruction.

Transfer Admission

The primary responsibility of the MSA Program is to offer anesthesiologist assistant training to any person who meets the admission requirements and is accepted to the Program. However, program format and enrollment constraints typically do not permit acceptance of transfer applicants.

Credit Conversion Policy

Case Western Reserve University uses a semester system. The University does accept quarter credit hours. Quarter credit hours are worth two-thirds (2/3) of one (1) semester hour.

However, quarter credit hours may be rounded to the nearest whole number at the discretion of the MSA Program Admissions Committee with consideration given to the coursework and grade earned.

Shadowing Experience

A clinical shadowing experience may be offered to prospective students interested in applying to the MSA Program at Case Western Reserve University. To inquire about shadowing opportunities available in Cleveland, Houston, and Washington, please contact the respective MSA Office. Procedures for scheduling a shadowing experience differ per site and per hospital.

Shadowing provides prospective students an excellent opportunity to learn what a certified anesthesiologist assistant does on a daily basis and to gain clinical experience. Clinical shadowing experience with a certified anesthesiologist assistant is highly encouraged prior to application. The MSA Program Admissions Committee will look favorably upon anesthesia shadowing experience obtained through the MSA Network or with an anesthesia professional²⁹ outside of the MSA Network. Shadowing verification documents received from the MSA Network or another institution should be uploaded with the application for consideration.

Interviews

Competitive candidates will be invited to participate in interviews at their preferred location of study. Interviews will be conducted by members of the MSA Program Admission Committee, and may include program leadership, faculty, and staff.

Acceptance

Selected candidates receive written notification of their acceptance, or offer letter, via email. Candidates who would like to accept the MSA Program's offer of admission must respond in writing and submit a \$3,000 non-refundable deposit within 10 business days of receipt of the offer letter. The non-refundable deposit will be applied to the candidate's summer tuition.

If a response is not received from the candidate within 10 business days, the offer is void and the candidate's seat may be offered to another candidate.

Though it may have no bearing on acceptance, candidates wishing to enter the MSA Program should be aware that a prior felony conviction may restrict their ability to obtain professional licensure or employment. Acceptance into the MSA Program and completion of study does not imply or guarantee that any candidate will be able to obtain such licensure or employment.

Background Screening

Accepted students must pass a comprehensive background screening prior to matriculation. The non-refundable cost of the background screening and associated drug testing is paid by the student. Students accepted into the Cleveland program must submit Ohio and/or FBI fingerprints, also non-refundable and conducted at their own cost. Detailed instructions for completing the background screening are shared directly with accepted students via email as soon as the deposit is received.

²⁹ Shadowing experience with an anesthesiologists or nurse anesthetist can provide valuable insight, particularly for prospective students who do not live in a state where certified anesthesiologist assistants can currently practice. However, it is highly encouraged that all prospective students shadow with a CAA if possible.

Physical and Technical Requirements

The following section is excerpted from the Master of Science in Anesthesia Program's Non-Discrimination Policy, which can be viewed in full at <https://case.edu/medicine/msa-program/curriculum/program-policies>

Students in the Master of Science in Anesthesia Program at Case Western Reserve University function as an integral part of a patient's anesthesia care team. Certain essential abilities are considered necessary for the safe execution of these duties. These include general abilities required of most healthcare practitioners, and specific abilities that relate more directly to the practice of anesthesia. The essential requirements include but are not limited to those detailed below.

General Requirements

Motor Skills

- Physical dexterity to master all technical and procedural aspects of patient care, and adequate motor capability to perform complex two-handed tasks.
- Ability to lift and support patients.
- Adequate physical stamina and energy to carry out taxing duties over long periods of up to 24 hours of continuous duty.
- Adequate motor function to stand and walk for prolonged periods.
- Ability to, on occasion, run to emergent situations, such as codes and trauma emergencies.

Sensory Abilities

- The ability to gather all relevant information about a patient's physical and psychosocial status with all five senses, especially sight, hearing, and touch.
- Students must be able to obtain a full medical and psychosocial history.
- Perform a physical examination.
- Make an accurate diagnosis and treat patients in an appropriate and timely way.
- Students must be capable of perceiving the signs of disease as manifested through the physical examination.
- Students must be capable of gathering and synthesizing information derived from direct observation of the body surfaces, palpable changes in organs and limbs, auditory information (such as patient voice, heart tones, bowel and lung sounds), and detection of the presence or absence of densities in the chest, masses in the abdomen and deformities of the extremities.
- Students' hearing and sight must be adequate enough to be able to gather information from patient monitors a short distance away in a moderately noisy environment, and be able to detect and respond promptly to auditory and visual patient alarm systems.

Intellectual Abilities

- Medical training requires essential abilities in information acquisition. A student must have the ability to understand information presented in the form of lectures, written material, and projected images.
- Students must also have the cognitive abilities necessary to master relevant content in basic science and advanced anesthesia knowledge at a level considered appropriate by the faculty. These skills can be described as the ability to comprehend, memorize, analyze and synthesize material.
- Students must be able to discern and comprehend dimensional and spatial relationships of structures, and be able to develop reasoning and decision-making skills appropriate to the practice of medicine and anesthesia.
- Students must be accurate and careful in all dealings with their patients.
- Students must develop the habits of life-long learning.

Communication Skills

- Students must have the ability to take a medical history and perform a directed physical examination; this requires an ability to communicate fully with the patient, using language translation when necessary.
- Students must be able to communicate effectively with patients and families. They must also be able to communicate effectively with other anesthesia personnel, physicians, technicians, nurses and operating room personnel.
- Students should be able to maintain a congenial atmosphere within their work environment, which promotes optimum patient care.
- Students should communicate appropriately with their supervising attending or instructors in all aspects of patient care.
- Students must have the ability to assess all pertinent information, including the ability to recognize the significance of non-verbal responses.
- Students must be able to make an immediate assessment of information provided to allow for appropriate, well-focused, rapid follow-up inquiry.
- Students must be capable of responsive, empathetic listening to establish rapport in a way that promotes openness on issues of concern and sensitivity to potential cultural differences.
- Students must be able to process and communicate information on the patient's status with accuracy in a timely manner to other anesthesia personnel, physician colleagues and other members of the health care team; this requires an ability to communicate in a succinct yet comprehensive manner and in a setting in which the time available is limited.
- Written or dictated patient assessments, prescriptions, and other documentation must be complete, legible, and accurate.
- Adequate communication may also rely on a student's ability to make a correct judgment in seeking supervision and consultation in a timely manner.

Professional Behavior

- All students must exhibit professional behaviors, including the ability to place others' needs ahead of their own; display compassion, empathy, altruism, tolerance, integrity, and responsibility; and possess an ability to exercise the requisite judgment in the practice of medicine and anesthesia.
- Students should possess the necessary emotional maturity and stability to function effectively under the stress that is inherent in medicine and to adapt to circumstances that are unpredictable or that change rapidly.
- Students must be able to interact productively, cooperatively, and in a collegial manner with individuals of differing personalities and backgrounds. They must also be an active contributor to the process of providing health care by demonstrating the ability to engage in teamwork and team building.
- Students must demonstrate a clear ability to identify and set priorities in patient management and in all aspects of their professional work.
- Students must be dependable, punctual, and perform work in a timely manner.

Specific Requirements

There are several essential functions specific to the task of providing anesthesiology services. The ability to carry out these functions is a requirement for admission to, retention in, and graduation from the Master of Science in Anesthesia Program at Case Western Reserve University. It is the responsibility of any student with disabilities to request specific accommodations that seem reasonable; more information for students with disabilities follows. These accommodations will be evaluated in a fair and objective manner to ensure no compromise in patient safety.

MSA students shall be capable of:

- Being on call and working in-house for up to 24 hours.
- Performing modest lifting at the height of a typical operating room stretcher (e.g., controlling a patient's head during patient transfer from operating room table to transport bed; lifting bags of intravenous fluid and blood to the top of an IV pole; or lifting infusion pumps).
- Standing for several minutes at a time (e.g., observing surgery over the surgical drapes at critical points in the surgery).
- Walking and pushing a patient stretcher for long distances (e.g., moving patient from patient holding areas to the operating rooms and back to the post-anesthesia care facility or moving patients to and from critical care units which may be distant from the operating room).
- Reaching to a height of six to seven feet (e.g., to place intravenous fluid bags on IV poles) Kneeling, bending, stooping, and crouching (e.g., to check lines below the level of the operating room table).
- Reading patient monitors from a distance of six to eight feet.
- Hearing and understanding spoken requests, and being able to detect and

discriminate patient monitor alarms.

- Hearing adequately enough to assess the lung and heart sounds of patients.
- Comprehending and speaking English fluently, including medical terminology.
- Responding to cardiac arrests and urgent calls in a timely fashion (e.g., running or walking quickly to any floor in the hospital, at times without the aid of the elevators if that would cause an undue delay.)
- Assuming unusual positions while caring for patients on the wards and in the ICU (e.g., lying on the floor to intubate patients who have experienced cardiac arrest or leaning over equipment at the head of the patient beds to intubate patients or place central lines)
- Reporting to work promptly, and maintaining a high level of personal hygiene.
- Responding to all pager or telephone calls promptly during a period of duty.
- Refraining from the use of alcohol, sedatives, and narcotics within eight hours of reporting to work and throughout the clinical shift. There is no tolerance for violation of this requirement.

Network Guidelines for Satellite Rotation Proposals

In accordance with the Case Western Reserve University Master of Science in Anesthesia Network Student Handbook, second-year students may complete the permitted number of elective satellite rotations for their location of study. Students may choose external general rotations from the network list or propose an external clinical site.

If you would prefer to propose an external site, you must complete the following steps:

1. Schedule a meeting with local leadership.

You must schedule a meeting with the local program director or administrative operations manager to discuss the proposed external site. MSA leadership will provide guidance on moving forward with the request.

2. Contact your proposed external site.

Following your meeting with local leadership, you may reach out to your proposed external site to request your rotation and collect key information on the site as requested by MSA leadership.

You should not contact the proposed site without the express permission of the local program director or administrative operations manager. In some instances, the program may prefer initial contact is made by program administration. You will be advised by leadership accordingly.

Timeline

In Cleveland and Houston, the above steps must be completed at least sixty days prior to the start of the proposed elective satellite rotation.

In Washington, the above steps must be completed by the 15th of the month at least two months prior to the month of the proposed rotation start date. For example, the administrative operations manager must receive all forms on January 15 for a rotation start date of March 1.

If an MSA student or proposed satellite rotation site fails to complete all necessary steps and paperwork at least one month prior to the start of the proposed elective satellite rotation, then the request for an elective satellite rotation will be null and void.

These are internal requirements, and may not accurately reflect the timelines for individual hospitals. In some instances, hospitals have taken up to four months to process student requests and the associated paperwork. If you are interested in requesting a satellite rotation, we recommend beginning the process early in your second year to ensure you meet all internal and external requirements.

Notification of Decision

The local program director will review and will either approve or deny the request. Once approved or denied, the administrative operations manager will notify the student and the Manager of Partnerships and Development to begin facilitating a new affiliation agreement. Elective satellite rotations are not guaranteed and may not be approved. Do not purchase an airline ticket or make any additional plans for the elective rotation until you receive the green light from your administrative operations manager.

All MSA policies apply during an elective satellite rotation. For the complete policy regarding elective satellite rotations, please review the Elective Satellite Rotations section under Policies Specific to Second-Year Students in the Network Student Handbook.

Evaluation Form Examples

A selection of evaluation forms follows. These forms are completed online by clinical instructors. These are provided as an example, and are not meant to be exhaustive.

First Year Summer – Clinical Rotation

| | |
|---------------------------|---|
| Subject: | _____ |
| Evaluator: | _____ |
| Site: | _____ |
| Period: | _____ |
| Dates of Rotation: | _____ |
| Rotation: | First Year - Summer - Rotation |
| Form: | First Year - Summer - Clinical Evaluation |

(Question 1 of 4 - Mandatory)

| | Exemplary Performance | Exceeded Expectation | Met Expectation | Below Expectation | Unacceptable | N/A |
|--|-----------------------|----------------------|-----------------|-------------------|--------------|-----|
| Operating Room Setup - Thoroughly prepared, on time, appropriate checks performed | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Operating Room Setup - Checks patency of breathing circuit and suction before each case | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Operating Room Setup - Has appropriate airway equipment available for each case | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Operating Room Setup - Has appropriate emergency drugs available for each case | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Operating Room Setup - Chooses appropriate breathing circuit (mask and bag size) | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| IV Placement - Selects most appropriate vein and catheter | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| IV Placement - Successfully places IV within 2 tries | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |

| | | | | | | |
|--|-----|-----|-----|-----|-----|---|
| IV Placement - Uses good aseptic technique and cleans up afterwards | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| IV Placement - Selects appropriate rate for fluid infusion and monitors throughout case | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| IV Placement - Can calculate patient fluid deficit, replacement and allowable bloodloss | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |

(Question 2 of 4 - Mandatory)

| | Exemplary Performance | Exceeded Expectation | Met Expectation | Below Expectation | Unacceptable | N/A |
|--|-----------------------|----------------------|-----------------|-------------------|--------------|-----|
| Perioperative skills - Applies and removes monitors appropriately and in a timely manner | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Perioperative skills - Adequately manages the airway and recognizes airway problems | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Perioperative skills - Successfully intubates patient by second attempt | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Perioperative skills - Continually monitors patient and attentive to case (incision, EBL) | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Perioperative skills - Responds appropriately and promptly to changes in patient status | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Perioperative skills - Completes anesthetic record neatly, completely, and in timely matter | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Professionalism - Eager to gain hands on experience and knowledge | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Professionalism - Demonstrates openness to constructive criticism and works to improve | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |

| | | | | | | |
|---|-----|-----|-----|-----|-----|---|
| Professionalism - Asks for assistance at appropriate times | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
|---|-----|-----|-----|-----|-----|---|

Comments *(Question 3 of 4 - Mandatory)*

Please enter comments for program and student to read.

Confidential Comments: *(Question 4 of 4, Confidential)*

Please enter confidential comments for program director only. Not viewable by student. (Required if scores of Unacceptable or Exemplary Performance were given)

First Year – Fall Clinical Rotation

| | |
|---------------------------|---|
| Subject: | _____ |
| Evaluator: | _____ |
| Site: | _____ |
| Period: | _____ |
| Dates of Rotation: | _____ |
| Rotation: | First Year - Fall - Rotation |
| Form: | First Year - Fall - Clinical Evaluation |

(Question 1 of 4 - Mandatory)

| | Exemplary Performance | Exceeded Expectation | Met Expectation | Below Expectation | Unacceptable | N/A |
|--|------------------------------|-----------------------------|------------------------|--------------------------|---------------------|------------|
| Operating room set-up - Performs the appropriate room set up on time for each case | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Operating room set-up - Checks patency of breathing circuit and suction before each case | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Operating room set-up - Has airway equipment, circuit, emergency drugs available for each case | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Operating room set-up - Keeps room and table top organized with essentials conveniently located | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| IV Placement - Successfully places IV in appropriate vein within 3 attempts | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |

| | | | | | | |
|---|-----|-----|-----|-----|-----|---|
| IV Placement - Selects appropriate rate for fluid infusion and monitors throughout case | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| IV Placement - Can calculate patient fluid deficit, replacement and allowable bloodloss | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |

(Question 2 of 4 - Mandatory)

| | Exemplary Performance | Exceeded Expectation | Met Expectation | Below Expectation | Unacceptable | N/A |
|--|-----------------------|----------------------|-----------------|-------------------|--------------|-----|
| Perioperative skills - Recognizes airway obstruction and appropriately corrects problems | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Perioperative skills - Successfully intubates patient by second attempt | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Perioperative skills - Can recognize correct or incorrect placement of ETT | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Perioperative skills - Continually monitors patient and attentive to case (incision, EBL) | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Perioperative skills - Responds appropriately and promptly to changes in patient status | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Perioperative skills - Completes anesthetic record neatly, completely, and in timely matter | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Perioperative skills - Extubates/emerges patient appropriately and monitors to PACU | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |

| | | | | | | |
|--|-----|-----|-----|-----|-----|---|
| Perioperative skills - Helps formulate the anesthetic plan based on preop assessment | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Perioperative skills - Understands pharmacology of drugs/agents: doses, side effects, actions | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Perioperative skills - Demonstrates skill in airway management & choice of airway, LMA, etc. | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Professionalism - Eager to gain hands on experience and knowledge | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Professionalism - Demonstrates openness to constructive criticism and works to improve | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Professionalism - Asks for assistance at appropriate times | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |

Comments (Question 3 of 4 - Mandatory)

Please enter comments for program and student to read.

Confidential Comments: (Question 4 of 4, Confidential)

Please enter confidential comments for program director only. Not viewable by student. (Required if scores of Unacceptable or Exemplary Performance were given)

First Year – Fall Clinical Rotation

| | |
|---------------------------|---|
| Subject: | _____ |
| Evaluator: | _____ |
| Site: | _____ |
| Period: | _____ |
| Dates of Rotation: | _____ |
| Rotation: | First Year - Fall - Rotation |
| Form: | First Year - Fall - Clinical Evaluation |

(Question 1 of 4 - Mandatory)

| | Exemplary Performance | Exceeded Expectation | Met Expectation | Below Expectation | Unacceptable | N/A |
|--|------------------------------|-----------------------------|------------------------|--------------------------|---------------------|------------|
| Operating room set-up - Performs the appropriate room set up on time for each case | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Operating room set-up - Checks patency of breathing circuit and suction before each case | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Operating room set-up - Has airway equipment, circuit, emergency drugs available for each case | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Operating room set-up - Keeps room and table top organized with essentials conveniently located | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| IV Placement - Successfully places IV in appropriate vein within 3 attempts | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |

| | | | | | | |
|---|-----|-----|-----|-----|-----|---|
| IV Placement - Selects appropriate rate for fluid infusion and monitors throughout case | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| IV Placement - Can calculate patient fluid deficit, replacement and allowable bloodloss | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |

(Question 2 of 4 - Mandatory)

| | Exemplary Performance | Exceeded Expectation | Met Expectation | Below Expectation | Unacceptable | N/A |
|--|-----------------------|----------------------|-----------------|-------------------|--------------|-----|
| Perioperative skills - Recognizes airway obstruction and appropriately corrects problems | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Perioperative skills - Successfully intubates patient by second attempt | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Perioperative skills - Can recognize correct or incorrect placement of ETT | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Perioperative skills - Continually monitors patient and attentive to case (incision, EBL) | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Perioperative skills - Responds appropriately and promptly to changes in patient status | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Perioperative skills - Completes anesthetic record neatly, completely, and in timely matter | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Perioperative skills - Extubates/emerges patient appropriately and monitors to PACU | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |

| | | | | | | |
|--|-----|-----|-----|-----|-----|---|
| Perioperative skills - Helps formulate the anesthetic plan based on preop assessment | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Perioperative skills - Understands pharmacology of drugs/agents: doses, side effects, actions | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Perioperative skills - Demonstrates skill in airway management & choice of airway, LMA, etc. | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Professionalism - Eager to gain hands on experience and knowledge | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Professionalism - Demonstrates openness to constructive criticism and works to improve | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Professionalism - Asks for assistance at appropriate times | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |

Comments (Question 3 of 4 - Mandatory)

Please enter comments for program and student to read.

Confidential Comments: (Question 4 of 4, Confidential)

Please enter confidential comments for program director only. Not viewable by student. (Required if scores of Unacceptable or Exemplary Performance were given)

Clinical Evaluation Second Year – General

| | |
|---------------------------|---|
| Subject: | _____ |
| Evaluator: | _____ |
| Site: | _____ |
| Period: | _____ |
| Dates of Rotation: | _____ |
| Rotation: | Second Year - General Rotation |
| Form: | Clinical Evaluation Second Year - General |

(Question 1 of 4 - Mandatory)

| | Exemplary Performance | Exceeded Expectation | Met Expectation | Below Expectation | Unacceptable | N/A |
|--|-----------------------|----------------------|-----------------|-------------------|--------------|-----|
| Technical and Manual Skills - Demonstrates organization and efficiency in case management | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Technical and Manual Skills - Demonstrates skill with IV placement and fluid management | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Technical and Manual Skills - Demonstrates skill with airway management and choice of airway | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Technical and Manual Skills - Recognize airway obstruction and appropriately corrects problem | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Technical and Manual Skills - Successfully intubates with smooth transition to mechanical ventilation | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Technical and Manual Skills - Completes anesthetic record neatly, completely and in timely manner | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Technical and Manual Skills - Appropriate, on | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |

| | | | | | | |
|---|-----|-----|-----|-----|-----|---|
| time, room set up for each case | | | | | | |
| Clinical Knowledge and Reasoning - Performs preanesthetic assessment correctly and in a timely manner | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Clinical Knowledge and Reasoning - Understands medical conditions which require specific intervention | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Clinical Knowledge and Reasoning - Develops and can defend an appropriate anesthetic plan | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Clinical Knowledge and Reasoning - Demonstrates understanding of anesthetic agents/drugs | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Clinical Knowledge and Reasoning - Administrates appropriate anesthetic agents and dosages | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Clinical Knowledge and Reasoning - Demonstrates understanding of physiology related to anesthesia | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Clinical Knowledge and Reasoning - Continually monitors patient and is attentive to the case (incision, EBL) | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Clinical Knowledge and Reasoning - Responds appropriately and promptly to changes in patient status | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Clinical Knowledge and Reasoning - Extubates/emerges patient | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |

| | | | | | | |
|--|-----|-----|-----|-----|-----|---|
| appropriately and monitors to PACU | | | | | | |
| Clinical Knowledge and Reasoning - Can apply cognitive learning to clinical setting | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |

(Question 2 of 4 - Mandatory)

| | Exemplary Performance | Exceeded Expectation | Met Expectation | Below Expectation | Unacceptable | N/A |
|---|-----------------------|----------------------|-----------------|-------------------|--------------|-----|
| Professionalism - Eager to gain hands on experience and knowledge | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Professionalism - Functions calmly and appropriately in ALL situations and prioritizes well | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Professionalism - Demonstrates openness to constructive criticism and works to improve | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Professionalism - Researches cases independently and understands pertinent physiology | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Professionalism - Asks for assistance at appropriate times | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Advanced Techniques in Anesthesia - Demonstrates understanding and skill in advanced monitoring (A-line, Swan, CVP, Echo, etc) | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Advanced Techniques in Anesthesia - Demonstrates understanding and skill with regional anesthesia (Spinal, Epidural, Caudal, Bier Block, Axillary Block, etc.) | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Advanced Techniques in Anesthesia - Demonstrates understanding and skill with advanced airway management | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |

| | | | | | | |
|--|--|--|--|--|--|--|
| (Nasal intubation, Endobronchial, Fiberoptics, CPR) | | | | | | |
|--|--|--|--|--|--|--|

Comments *(Question 3 of 4 - Mandatory)*

Please enter comments for program and student to read.

Confidential Comments: *(Question 4 of 4, Confidential)*

Please enter confidential comments for program director only. Not viewable by student. (Required if scores of Unacceptable or Exemplary Performance were given)

Clinical Evaluation Second Year – OB

| | |
|---------------------------|---|
| Subject: | _____ |
| Evaluator: | _____ |
| Site: | _____ |
| Period: | _____ |
| Dates of Rotation: | _____ |
| Rotation: | Second Year - OB Rotation |
| Form: | Clinical Evaluation Second Year - Specialty |

(Question 1 of 4)

| | Exemplary Performance | Exceeded Expectation | Met Expectation | Below Expectation | Unacceptable | N/A |
|---|-----------------------|----------------------|-----------------|-------------------|--------------|-----|
| Professionalism - Appropriately sets up OR before 7am | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Professionalism - Displays appropriate bedside manner with patients and family | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Professionalism - Displays willingness to help with writing H & Ps for L & D patients | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Professionalism - Adequately completes Pre-Op and presents to Attending/AA/Sr. Resident | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Professionalism - Participates in daily lectures | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Professionalism - Interacts appropriately with awake patients | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Professionalism - Eager to learn about various obstetric complications and procedures | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Professionalism - Generally helpful and | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |

| | | | | | | |
|--|-----|-----|-----|-----|-----|---|
| positively adds to team atmosphere | | | | | | |
| Professionalism - Accepts feedback from other team members | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Professionalism - Communicates effectively with the rest of team | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Clinical Knowledge and Reasoning - Prepares a thorough presentation of admitted patients | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Clinical Knowledge and Reasoning - Demonstrates appropriate knowledge of patient history | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Clinical Knowledge and Reasoning - Understands various obstetric conditions which might require specific intervention | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Clinical Knowledge and Reasoning - Displays adequate knowledge of anatomy and landmarks for neuraxial anesthesia | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Clinical Knowledge and Reasoning - Demonstrates understanding of neuraxial anesthesia and drugs | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |

(Question 2 of 4)

| | Exemplary Performance | Exceeded Expectation | Met Expectation | Below Expectation | Unacceptable | N/A |
|--|------------------------------|-----------------------------|------------------------|--------------------------|---------------------|------------|
| Technical and Manual Skills - Demonstrates familiarity with equipment | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |

| | | | | | | |
|---|-----|-----|-----|-----|-----|---|
| Technical and Manual Skills - Uses appropriate sterile technique | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Technical and Manual Skills - Follows directions/guidance from supervising AA, Attending or Resident | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Technical and Manual Skills - Demonstrates adequate physical examination skills | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Technical and Manual Skills - Completes anesthetic record neatly, completely and in timely manner | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Technical and Manual Skills - Demonstrates skill with IV placement and fluid management | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Patient Management - Administers appropriate neuraxial anesthesia and doses | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Patient Management - Continually monitors patient and is attentive to patient changes (BP, fetal heart rate, incision, EBL) | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Patient Management - Administers appropriate general anesthesia and doses | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Patient Management - Demonstrates organization and efficiency in case management | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Patient Management - Demonstrates appropriate fluid therapy | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |

| | | | | | | |
|--|-----|-----|-----|-----|-----|---|
| Patient Management - Asks relevant questions | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
|--|-----|-----|-----|-----|-----|---|

Comments *(Question 3 of 4 - Mandatory)*

Please enter comments for program and student to read.

Confidential Comments: *(Question 4 of 4, Confidential)*

Please enter confidential comments for program director only. Not viewable by student. (Required if scores of Unacceptable or Exemplary Performance were given)

Clinical Evaluation Second Year – SICU

| | |
|---------------------------|---|
| Subject: | _____ |
| Evaluator: | _____ |
| Site: | _____ |
| Period: | _____ |
| Dates of Rotation: | _____ |
| Rotation: | Second Year - SICU |
| Form: | Clinical Evaluation Second Year - Specialty |

(Question 1 of 4)

| | Exemplary Performance | Exceeded Expectation | Met Expectation | Below Expectation | Unacceptable | N/A |
|--|-----------------------|----------------------|-----------------|-------------------|--------------|-----|
| Professionalism - Arrives no later than 7am to evaluate assigned patients | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Professionalism - Displays appropriate bedside manner with patients and family | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Professionalism - Displays willingness to help with writing H&Ps for patients admitted to ICU | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Professionalism - Actively participates in discussions about each patient's care | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Professionalism - Participates in afternoon lectures, board reviews, and journal clubs | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Professionalism - Communicates effectively with the rest of the team | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Professionalism - Generally helpful and positively adds to team atmosphere | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Professionalism - Accepts feedback from other team members | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |

| | | | | | | |
|---|-----|-----|-----|-----|-----|---|
| Professionalism - Eager to learn about various disease processes | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
|---|-----|-----|-----|-----|-----|---|

(Question 2 of 4 - Mandatory)

| | Exemplary Performance | Exceeded Expectation | Met Expectation | Below Expectation | Unacceptable | N/A |
|---|-----------------------|----------------------|-----------------|-------------------|--------------|-----|
| Line Placement/ Invasive procedures - Displays adequate technical knowledge of the procedure | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Line Placement/ Invasive procedures - Demonstrates familiarity with equipment | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Line Placement/ Invasive procedures - Uses appropriate sterile technique | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Line Placement/ Invasive procedures - Follows direction/guidance from supervising resident | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Line Placement/ Invasive procedures - Displays adequate knowledge of anatomy and landmarks | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Patient Management - Adequately completes H&P and presents incoming patient to Attending/Sr. Resident | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Patient Management - Prese | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |

| | | | | | | |
|---|-----|-----|-----|-----|-----|---|
| nts complete symptoms based plan for the day | | | | | | |
| Patient Management - Prepares a thorough presentation of assigned patient(s) | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Patient Management - Asks relevant questions | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Patient Management - Demonstrates adequate physical examination skills | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Patient Management - Demonstrates appropriate knowledge of patient history | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Patient Management - Demonstrates knowledge of the patient medications | 5.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0 |

Comments (Question 3 of 4 - Mandatory)

Please enter comments for program and student to read.

Confidential Comments: (Question 4 of 4, Confidential)

Please enter confidential comments for program director only. Not viewable by student. (Required if scores of Unacceptable or Exemplary Performance were given)

Forms

The following forms must be completed and returned to the local manager of operations during first-year orientation. In some cases, these forms may be distributed online. Check with your local Manager of Administrative Operations for the latest information.



Acknowledgment of Receipt

I, _____, have read the Case Western Reserve University Master of Science in Anesthesia Network Student Handbook. I have been given the opportunity to ask questions and to clarify anything I did not understand. I fully understand that the policies outlined in the handbook apply to me as a Master of Science in Anesthesia student and that failure to abide by these policies may result in disciplinary action or separation from the Program and University.

Student Signature

Date

Administrative Operations Manager Signature

Date



Emergency Information

Please complete the following form, and print clearly. If you have any changes to the below information at any time, please notify the local Education Specialist immediately.

Personal Information

Name: _____ Date of Birth: _____

Address: _____

Cell Phone: _____ Home Phone: _____

Personal Email: _____
Please provide an alternative to your @case.edu email.

Emergency Contact

Name: _____ Relationship: _____

Address: _____

Cell Phone: _____ Home Phone: _____

Personal Email: _____



Release of Information Authorization

I, _____, a student in the Master of Science in Anesthesia Program at Case Western Reserve University (CWRU MSA Program), do hereby authorize the release of information to clinical affiliates of the CWRU MSA Program for the purposes of conducting clinical rotations at the assigned facilities during my enrollment in the program.

I understand that the information released may include but is not limited to clinical and didactic performance information, transcripts, personal identifying information, immunization records, background check and drug screen information, and personal contact information. I hereby release Case Western Reserve University, the Master of Science in Anesthesia Program, and its clinical affiliates from any claims that may result from the release of such information.

Student Signature

Date

Witness Signature

Date

Witness Signature

Date



Authorization for Random Drug Testing and Release of Drug Test Results

I understand that in order to participate in clinical education programs at certain healthcare facilities with which the Master of Science in Anesthesia Program, Department of Anesthesiology and Perioperative Medicine, Case Western Reserve University (“CWRU”) is affiliated, students must consent to random drug testing and reasonable suspicion drug testing. Reasonable suspicion testing will be performed when the program has reasonable cause to suspect a student of drug use.

I understand that I may refuse to submit to random drug testing and reasonable suspicion drug testing. I understand that I may not be eligible to participate in clinical education programs offered by CWRU if I refuse to consent to testing, if the test results are positive, or if there is evidence (in the opinion of CWRU, the clinical education site, or the testing laboratory) that the testing sample was tampered with, substituted, or altered in any way. I understand that being unable to participate in clinical education programs offered by CWRU will preclude my continuing in the Master of Science in Anesthesia Program which will result in my dismissal from Case Western Reserve University.

I understand that the tests will detect illegal drugs, other non-prescribed intoxicants, and some prescription drugs. I understand that positive test results caused by the appropriate use of legally prescribed medications will not affect my eligibility to participate in clinical education programs unless such use would cause my participation or performance to be unsafe. I understand that the program policy currently prohibits the use of medicinal marijuana and its derivatives (such as CBD oil), even if prescribed.

I hereby voluntarily consent to being tested for drugs. I voluntarily consent to testing by any method that CWRU deems reasonable and reliable, including blood analyses and urinalysis. I also consent to the release of the test results to CWRU and to any agency or facility that is affiliated with CWRU as a site for clinical education. I hereby waive any privilege concerning my drug test results for the purposes authorized above, and I hereby release CWRU from any and all claims, liability, and damages that might arise from the use and/or disclosure of such information pursuant to this authorization.

Student Signature

Student Printed Name

Date

All Media Release and Clearance Form

I, _____ give Case Western Reserve University, its assigns, licensees and representatives the worldwide, perpetual, and irrevocable right to create recordings of my image (including my picture, portrait or photograph), likeness, and/or voice (hereby referred to as "recordings"). I agree the recordings may take the form of photographs, films, video and audio tapes, CD-ROMs, DVDs, digital files, or any other media.

I further authorize Case Western Reserve University to exhibit or distribute such recording in whole or in part without restrictions or limitation for any educational or promotional purpose that Case Western Reserve University and those acting pursuant to its authority deem appropriate.

I understand that once information and/or materials are released to the public information media – including but not limited to television, newspaper, magazine, radio and the Internet – Case Western Reserve University no longer has control over their use.

I hereby release and discharge Case Western Reserve University, as well as their trustees, officers, employees, and representatives from any and all claims and demands arising out of or in connection with the use of the recordings.

I further acknowledge that I will not be compensated for any uses made of the recordings. I also waive any rights of privacy in the recordings, including but not limited to any rights that might otherwise be protected by the Family Educational Rights and Privacy Act.

I have had opportunity to review and seek explanation of the provisions contained above, have carefully read and understand them, and agree to be bound by them. I voluntarily and irrevocably give my consent and agree to this Release and Waiver. I represent that am eighteen (18) years of age or older.

Printed Name _____

Signature _____

Date _____

If subject is under the age of 18:

Legal guardian _____

Media Relations representative/witness: _____

Legal Approved 08.10.10



Pregnancy Termination Survey

It is important for the Master of Science in Anesthesia Program to keep a list of who is willing and who is not willing to give anesthesia for pregnancy terminations. All students will need to complete this form.

There are two types of pregnancy terminations: therapeutic and elective. Therapeutic terminations are performed for maternal health reasons or for fetal anomalies that may or may not be life threatening. Elective terminations are those initiated by personal choice. Laws governing pregnancy terminations differ by state, and policies may differ from hospital to hospital.

Please indicate below what you are or are not willing to participate in by circling the appropriate response, and return the form to your local education specialist **by the end of Orientation.**

If the Program does not hear from you by the deadline, **the Program will assume you are willing to participate in all types of pregnancy terminations and will list you as such.** If this is not true, you must respond by the deadline.

Name: _____

| | | |
|-------------------------------|-----|----|
| First Trimester: Elective | Yes | No |
| First Trimester: Therapeutic | Yes | No |
| Second Trimester: Elective | Yes | No |
| Second Trimester: Therapeutic | Yes | No |



Consensual Relationship Compliance Form

To ensure the program is maintaining ethical standards, all students, faculty, staff, and clinical instructors are required to disclose any consensual relationships that may be established between two members of the CWRU MSA community.

A consensual relationship is one that is romantic, intimate, or sexual in nature and to which both parties consent and which is currently ongoing. Consensual relationships requiring disclosure to the MSA Program include (but are not limited to) the following:

- Student/Student
- Student/Clinical Instructor or Preceptor
- Student/Faculty or Instructor
- Student/Staff

All students, faculty, staff, and clinical instructors are required to complete the Consensual Relationship Compliance Form even if you have nothing to report.*

Your Name: _____

Program Location: Cleveland Houston Washington DC

Your Role within the MSA Program (please circle):

Student Faculty / Instructor Clinical Instructor /
Preceptor Staff

Please Choose ONE of the following options:

- No, I do NOT have a consensual relationship for disclosure to the MSA Program.
- Yes, I AM currently in a consensual relationship requiring disclosure to the MSA Program.

If yes, please provide the names of the individuals involved in the consensual relationship. This information will be kept confidential within the MSA program:

Signature: _____ Date: _____

*If there is a change in the status relating to your consensual relationship, or you enter into a new consensual relationship, notify the MSA Program Office immediately so that an appropriate plan can be established to manage the professional relationship.



SCHOOL OF MEDICINE

CASE WESTERN RESERVE
UNIVERSITY

Master of Science in Anesthesia Program

Cleveland, Ohio
10900 Euclid Avenue
Sears Tower T408
Cleveland, Ohio 44106

216.368.2336

Houston, Texas
4203 Montrose Boulevard
Suite 100 and 150
Houston, Texas 77006

713.574.9491

Washington, D.C.
820 First Street, NE
Suite LL-150
Washington, D.C. 20002

202.758.2502

Attachment 5: Education and Training Fact Sheet



www.anesthetist.org

Certified Anesthesiologist Assistants

AA Education and Training

Educational Program Requirements

An accredited anesthesiologist assistant educational program must be supported by an anesthesiology department of a medical school that is accredited by the Liaison Committee on Medical Education or its equivalent. The Anesthesiology department must have the educational resources internally or through educational affiliates that would qualify it to meet the criteria of the Accreditation Council for Graduate Medical Education (ACGME), or its equivalent, for sponsorship of an anesthesiology residency program

Although the standards recognize the importance of a basic science education within a clinically oriented academic setting, it is also recognized that some of the supervised clinical practice components of the curriculum may be carried out in affiliated community hospitals that have the appropriate affiliation agreements specifying the requisite teaching faculty and staffing ratios for the clinical experience.

The AA curriculum is based on an advanced graduate degree model and requires at least two full academic years. The current programs are 24 to 28 months. Graduates from all AA educational programs earn a Master's Degree.

Prerequisites

Baccalaureate degree from a regionally accredited college or university in the US or Canada

- | | |
|----------------------------|-----------------------------------|
| English | Organic Chemistry with lab |
| General Biology with lab | Biochemistry |
| General Chemistry with lab | General Physics (lab recommended) |
| Human Anatomy with lab | Calculus |
| Human Physiology with lab | |

Advanced Statistics

Medical College Admissions Test (MCAT) or the Graduate Records Admission Test Examination (GRE).

*Please review training program websites for specific information regarding prerequisites.

| Master of Science in Anesthesia Average Matriculant GPA | | | U.S. Medical Schools Average Matriculant GPA | | |
|--|---------|---------|---|---------|---------|
| | Overall | Science | | Overall | Science |
| 2014 | 3.48 | 3.56 | 2014 | * | * |
| 2013 | 3.42 | 3.51 | 2013 | 3.54 | 3.44 |
| 2012 | 3.50 | 3.57 | 2012 | 3.54 | 3.44 |
| 2011 | 3.52 | 3.63 | 2011 | 3.53 | 3.43 |
| 2010 | 3.48 | 3.56 | 2010 | 3.53 | 3.43 |
| 2009 | 3.49 | 3.65 | 2009 | 3.51 | 3.51 |

www.aamc.org/data/facts/applicantmatriculant/ (Table 17)

*AAMC's GPA totals from 2014 are not yet available

Training Programs

- Emory University (Atlanta, GA)
- Case Western Reserve University (Cleveland, OH; Houston, TX; Washington, DC)
- Indiana University (Indianapolis, IN)
- Quinnipiac University (North Haven, CT)
- Medical College of Wisconsin (Milwaukee, WI)
- Nova Southeastern University (Tampa, FL; Fort Lauderdale, FL)
- South University (Savannah, GA)
- University of Colorado (Denver, CO)
- University of Missouri-Kansas City (Kansas City, MO)

The Commission on Accreditation of Allied Health Education Programs (CAAHEP) accredits AA training programs. The American Society of Anesthesiologists (ASA) is a CAAHEP member and participates in the accreditation processes for three health professions: Anesthesiologist Assistants, Respiratory Therapy and Emergency Medical Technician-Paramedic. CAAHEP is the largest accreditor in the health sciences field. In collaboration with its Committees on Accreditation, CAAHEP reviews and accredits over 2000 educational programs in 19 health science occupations and is recognized by the Council for Higher Education Accreditation.

Certification

The National Commission for Certification of Anesthesiologist Assistants (NCCAA) was founded in July 1989 to develop and administer the certification process for AAs in the United States. The NCCAA consists of commissioners representing the ASA and the American Academy of Anesthesiologist Assistants (AAAA) and includes physician and AA members (at-large). Graduates or senior students in the last semester of a CAAHEP-accredited AA educational program may apply for initial certification. Such a professional distinction is awarded to an AA who has successfully completed the Certifying Examination for Anesthesiologist Assistants administered by NCCAA in collaboration with the National Board of Medical Examiners (NBME). Certified AAs are permitted to use the designation CAA to indicate that they are currently certified.

The content for the Certifying Examination for Anesthesiologist Assistants is based on knowledge and skills required for anesthesiologist practice. NCCAA has contracted with NBME to serve as a consultant for the development and ongoing administration of the Certifying Examination. A Test Committee of Anesthesiologists and AAs is responsible for writing and evaluating test questions for the examinations. The first Certifying Examination was administered in 1992.

NCCAA maintains a database of Certified Anesthesiologist Assistants for verification of individual practitioners. Hospitals, practice groups, state boards and others may verify an individual AA's certification via a printed verification statement posted on the Verify Certification page of the NCCAA's web site, www.aa-nccaa.org. The web site also contains additional information about the National Commission and about the certification process.

Recertification

AAs are granted a time-limited certificate after passing the initial examination. The process for recertification requires that an AA submit documentation to NCCAA every two years that he/she has completed 40 hours of Continuing Medical Education (CME). In addition, every six years the practitioner must pass the examination for Continued Demonstration of Qualifications (CDQ).

The CDQ examination was first administered in 1998, making AAs the first anesthesia profession to require passage of a written examination as part of the recertification process. Failure to meet any of the above CME or examination requirements results in withdrawal of the AA's certification.

Attachment 6: Professional Overview



www.anesthetist.org

Certified Anesthesiologist Assistants

AA Professional Overview

Professional Definition

Certified Anesthesiologist Assistants (CAAs) are highly skilled health professionals who work under the direction of licensed physician Anesthesiologists to implement anesthesia care plans. CAAs work exclusively within the Anesthesia Care Team model, as described by the American Society of Anesthesiologists (ASA). The goal of AA education is to guide the transformation of qualified student applicants into competent health care practitioners who aspire to work in the Anesthesia Care Team for the benefit of patients.

All CAAs must complete a comprehensive didactic and clinical program at the **graduate school level**. To be admitted into an AA training program, students must have earned a baccalaureate degree with premedical coursework. AAs are trained extensively in the delivery and maintenance of quality anesthesia care as well as advanced patient monitoring techniques. AAs perform such tasks as administering drugs, obtaining vascular access, applying and interpreting monitors, establishing and maintaining a patient's airway, and assisting with preoperative assessment. AAs train and work under the supervision of physician Anesthesiologists who retain responsibility for the immediate care of the patient. The care team model expands the medical treatment provided by the physician Anesthesiologist and equips the medical facility to serve patients more effectively and efficiently.

History

In the early 1960s, leaders in the medical specialty of Anesthesiology recognized the existence of staffing shortages. To meet growing demands and to accommodate the increasing complexity of anesthesia and surgery, three Anesthesiologists (Drs. Gravenstein, Steinhaus, and Volpitto) proposed the concept of an "anesthesia technologist" who would be a member of the anesthesia team and would be considered an "applied physiologist." This was the precursor to what is now the Certified Anesthesiologist Assistant. The doctors designed an educational program whereby students would build on undergraduate premedical training then earn a master's degree in Anesthesiology. The concept became a reality in 1969 when the first AA training program began accepting students at Emory University in Atlanta, Georgia, followed shortly thereafter by a program at Case Western Reserve University in Cleveland, Ohio.

In 1989, the National Commission for Certification of Anesthesiologist Assistants (NCCAA) was established to create a national certification process. Since 2002, there has been a significant expansion of AA education programs in the US. Today, the ASA fully supports Anesthesiologist Assistants and the expansion of AA licensure and practice across the nation.

Scope of Practice

The scope of CAA clinical practice is generally the same as that of nurse anesthetists on the Anesthesia Care Team. The local scope of practice of CAAs is usually defined by the following:

- The medically directing Anesthesiologist
- The hospital credentialing body
- The state board of medicine
- Any applicable state statute or regulation.

Scope of Practice

Certified Anesthesiologist Assistants (CAAs) practice in the Anesthesia Care Team (ACT) with Physician Anesthesiologist oversight. The scope of clinical practice for CAAs is identical to that of nurse anesthetists working in the ACT.

The scope of practice of CAAs is determined by the following:

- The Physician Anesthesiologist
- The hospital credentialing body
- The state's board of medicine
- Any applicable state statute or regulation.

Job Description

The Anesthesiologist Assistant (AA) is qualified by academic and clinical education to provide anesthetic care under the direction of a qualified physician anesthesiologist. The physician anesthesiologist who is responsible for the Anesthesiologist Assistant is available to prescribe and direct particular therapeutic interventions.

By virtue of the basic medical science education and clinical practice experience, the Anesthesiologist Assistant is proficient in the use of contemporary patient monitoring and interpretation of data in all anesthesia care environments. The Anesthesiologist Assistant provides patient care that allows the supervising physician anesthesiologist to use his or her own medical education more efficiently and effectively.

The Anesthesiologist Assistant is prepared to gather patient data, perform patient evaluation, and to administer and document the therapeutic plan that has been formulated for the anesthetic care of the patient. The tasks performed by AAs reflect regional variations in anesthesia practice and state regulatory factors.

Under the direction of a physician anesthesiologist, in agreement with the ASA Statement on the Anesthesia Care Team (ACT) and in accordance with the AAAA Statement on the ACT, the Anesthesiologist Assistant's functions include, but are not limited to, the following:

- a. Obtain an appropriate and accurate preanesthetic health history, perform an appropriate physical examination, and record pertinent data in an organized and legible manner;
- b. Obtain diagnostic laboratory and related studies as appropriate, such as drawing arterial and venous blood samples and any other necessary patient fluids;

Practice Locations

Certified Anesthesiologist Assistants enjoy career pathways in a dynamic profession that continues to realize exponential growth, as evidenced by the addition of new training sites and new states opening to AA practice. States, territories, and districts in which CAAs work by license, regulation, and/or certification:

- Alabama
- Colorado
- District of Columbia
- Florida
- Georgia
- Indiana
- Kentucky
- Missouri
- New Mexico
- North Carolina
- Ohio
- Oklahoma
- South Carolina
- Vermont
- Wisconsin
- US Territory Guam

States in which AAs are granted practice privilege through physician delegation:

- Michigan
- Texas

If a state does not presently provide the legislative or delegatory option of AA practice, consultation should take place with the state board of medicine or other governing body to explore the specific legal implications of AA practice in your state. General information on the steps to establish CAA practice is available from the AAAA Director of State Affairs office (info@anesthetist.org) Additional information can be found at <https://www.anesthetist.org/info>

Recognized by Federal Government

CAAs may practice at any Veterans Affairs facility in all 50 states.

The federal Centers for Medicare and Medicaid Services (CMS) recognizes both Certified AAs and Certified Registered Nurse Anesthetists (CRNAs) as non-physician anesthesia providers. Similarly, commercial insurance payers make no distinction between the two anesthetist types with regard to payments for services provided under medical direction by a physician Anesthesiologist.

Standard: Organization and Staffing

The organization of Anesthesia services must be appropriate to the scope of the services offered. Anesthesia must be administered only by the following providers:

- A qualified physician Anesthesiologist;
- A doctor of medicine or osteopathy (other than an Anesthesiologist);
- A dentist, oral surgeon, or podiatrist who is qualified to administer anesthesia under state law;
- A CRNA, as defined in § 410.69(b) of the Federal Register, “who is under the supervision of the operating practitioner or of an Anesthesiologist who is immediately available if needed”; or
- An AA, as defined in § 410.69(b) of the Federal Register, “who is under the supervision of an Anesthesiologist who is immediately available if needed.”

Attachment 7: Scope of Practice/Job Description

- c. Insert and interpret data from invasive monitoring modalities such as arterial lines, pulmonary artery catheterization, and central venous lines, as delegated by the supervising physician anesthesiologist;
- d. Administer anesthetic agents and controlled substances under the direction of a supervising physician anesthesiologist. This includes, but not limited to, administration of induction agents, maintaining and altering anesthesia levels, administering adjunctive treatment and providing continuity of anesthetic care into and during the post-operative recovery period;
- e. Establish and maintain appropriate airway management and provide appropriate ventilatory support;
- f. Apply and interpret advanced monitoring techniques;
- g. Make post-anesthesia patient rounds by recording patient progress notes, compiling and recording case summaries, and by transcribing standing and specific orders;
- h. Evaluate and treat life-threatening situations, such as cardiopulmonary resuscitation, on the basis of established protocols (BLS, ACLS, and PALS);
- i. Perform duties in intensive care units, pain clinics, and other settings, as appropriate;
- j. Train and supervise personnel in the calibration, troubleshooting, and use of patient monitors;
- k. Perform administrative duties in an anesthesiology practice or anesthesiology department, including management of personnel;
- l. Participate in the clinical instruction of others; and
- m. 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 blocks.

Appendix D - Public Comments

Summary of Comments

| Profession | Support | Oppose | Oppose (Form Letter) | Total Opposed | Neutral /Other |
|--|---------|--------|----------------------|---------------|----------------|
| Anesthesiologist (MD) | 13 | 2 | 0 | 2 | 0 |
| Anesthesiologist Assistant* (AA) | 8 | 0 | 0 | 0 | 0 |
| Anesthesia Technologist/Technician (CAT, CATT) | 1 | 0 | 0 | 0 | 2 |
| Certified Registered Nurse Anesthetist (CRNA) | 0 | 31 | 131 | 162 | 11 |
| MD (Unspecified) | 7 | 4 | 3 | 7 | 1 |
| Organizations | 15 | 4 | 0 | 4 | 2 |
| Other/Unknown | 10 | 6 | 26 | 32 | 0 |
| Registered Nurse (RN) | 0 | 4 | 0 | 4 | 2 |
| Student Registered Nurse Anesthetist (SRNA) | 0 | 0 | 8 | 8 | 4 |
| Total Comments: 295 | 54 | 51 | 168 | 219 | 22 |

131 CRNAs, 3 MDs, 8 student nurse anesthetists, and 26 other/unknown wrote the following same or very similar form letter:

As a certified registered nurse anesthetist (CRNA) and a member of the Washington Association of Nurse Anesthetists (WANA), I urge you to reject the sunrise review application regarding licensure for anesthesiologist assistants (AAs). AAs do not improve access to care in Washington; in fact, there is reason to believe they will result in restricting access and driving up costs. AAs are narrowly trained and cannot practice without a licensed anesthesiologist. Finally, AAs are an unproven provider with no peer-reviewed studies that prove the safety of AAs.

Certified Registered Nurse Anesthetists (CRNAs) are certified anesthesia experts independently licensed to practice in all 50 states and the District of Columbia. Because of their extensive education and training, CRNAs are permitted by federal and state laws and regulations to provide every type of anesthesia service to patients without the involvement or presence of a physician anesthesiologist. All research studies on anesthesia safety and cost-effectiveness conducted in the last 20 years confirm that CRNAs provide the safest, most cost-effective anesthesia care to patients.

In contrast, AAs can only practice in 15 states plus the District of Columbia. They are limited by their training and licensure to providing clinical support to anesthesiologists and may not practice “apart from the supervision of an anesthesiologist,” according to the American Academy of Anesthesiologist Assistants (AAAA). Because AAs are required to be directly supervised by an anesthesiologist, the AA/anesthesiologist team is one of the costliest anesthesia delivery models with no scientific evidence of increased patient safety.

Because AAs cannot practice without anesthesiologist supervision, AAs do not practice in rural areas where CRNAs working without anesthesiologist involvement are the primary providers of anesthesia care. In fact, CRNAs are the only anesthesia provider in 72% of Washington’s rural hospitals. AAs, in contrast, can only practice where anesthesiologists practice, which greatly limits their utilization. AAs,

therefore, can't help solve problems of inadequate access to anesthesia care in rural and underserved communities.

If for any reason an AA's supervising anesthesiologist is not available, off-site, on vacation, or simply home for the day, the AA may not provide anesthesia care. The AA anesthesiologist-driven mode of practice, therefore, is inflexible and fails to adequately meet the needs of patients, hospitals, ambulatory surgical centers, or other healthcare settings. While nurse anesthesia educational programs graduate nurse anesthetists prepared for autonomous practice, the AA program curriculum is characterized by training that only allows them to assist anesthesiologists in technical functions.

Because CRNAs do not need to practice with an anesthesiologist, they are much more cost effective than AAs. With an AA, the need exists to educate and use two providers – the supervising anesthesiologist and the AA – to provide anesthesia care to one patient. With a CRNA, only that individual is needed to provide total anesthesia care to the patient. Essentially, compared with the anesthesiologist-AA staffing arrangement, one CRNA can provide the care of two providers.

AAs are an unproven provider. No peer-reviewed studies in scientific journals have been published regarding the quality of care of AA practice or AA anesthesia outcomes. The quality of care that AAs provide is unproven, as there is no meaningful research data concerning AA anesthesia safety. In contrast, the excellent, safe anesthesia care that CRNAs provide and associated anesthesia outcomes have been repeatedly demonstrated in peer-reviewed studies published in prominent journals.

It makes no sense to authorize AAs, a less qualified anesthesia provider that can only work with anesthesiologists and can't be used in any area where anesthesiologists don't practice, such as many rural locations. Please reject the application for licensure of anesthesiologist assistants.

Comment Submitted By: MORGAN SOFFE

I would like to voice my concerns and opposition for the act to replace CRNAs with Anesthesia Assistants (AAs).

One of my concerns is the costs of introducing AAs. No evidence states that the patient is safer with an AA present, as well as the fact that the AA must have an anesthesiologist present makes it even worse.

Another concern is the narrow training requirements of an AA. If they aren't trained in the right fields, can we be sure that they will provide better care than a CRNA? No, we can't.

Comment Submitted By: keandre butts

Anesthesiologist Assistant(AA) will prove to be a great addition to your healthcare system. AAs are highly trained and skilled healthcare workers that will help address the increasing shortage of anesthesia providers. I'm out aging society. The anesthesia care team model is a great way to promote and advocate for patient safety.

Comment Submitted By: Ashley Fedan

Thank you for taking the time to read and consider the comments regarding the licensure of anesthesiologist assistants. I am writing in opposition of the licensure of anesthesia assistants. The

rationales are based on a the Institute of Medicine (IOM) report, “The Future of Nursing: Leading Change, Advancing Health.” The recommendations offer many solutions regarding a suggested anesthesia provider shortage. The IOM recommended:

1. Nurses should practice to the full extent of their education and training.
2. Nurses should achieve higher levels of education and training through an improved educational system that promotes seamless academic progression.
3. Nurses should be full partners, with physicians and other health professionals, in redesigning health care in the United States.

I recognize that our families, neighbors, and communities need access to care. Certified registered nurse anesthetists (CRNAs), by utilizing the recommendations of the IOM report, offer the strong, feasible solutions to remedy the concerns listed in the Sunrise Review Bill.

Full Scope of Practice

To begin, CRNAs in Washington State have the ability to provide care to patients to the full ability of our training. I independently provide anesthesia in gynecology offices, ensuring women can have IUDs placed, uterine polyps removed, uterine ablations, and biopsies sampled under sedation. The access to care has promoted reproductive health of women in a safe, cost-effective manner. Anesthesiologist assistants cannot independently practice in this setting; they have to be supervised by an anesthesiologist.

I also work in ambulatory surgery centers providing anesthesia for transgender patients undergoing surgery to better identify their with their bodies. Access to care in this setting reduces the anxiety patients experience by entering the hospital. The overall cost of surgery is lessened and patients are discharged to the homes in an efficient, timely manner. Anesthesiologist assistants would offer no benefit in this practice and would not increase access to care in this setting; they cannot independently provide anesthesia. Two anesthesia providers in most of these circumstances is redundant and a poor utilization of healthcare dollars.

The anesthesia care team (ACT), which anesthesia assistants can provide supervised services, is the most expensive anesthesia practice model. As a solution to the workforce concerns by the WSSA, I would refer to Nursing Economics (2010), where the safety and costs of care can be reduced through an evolution to a collaborative, supervisory, or independent practice (please see Table 3 and 8 in the attached article). Much of the workforce concerns of staff turnover, retirement, or relocation would be resolved by this specific, very simple change in hospital or anesthesia group model. I currently work in one of the cost-effective collaborative models; it is collegial, safe, and financially prudent model that meets the needs of the hospital, surgeons, and patients in the community. Each anesthesia provider provides direct patient care- independently. In fact, it is one of the most positive places I have been as an employee. Anesthesia assistants would not be able to work here due to the expense, the supervision requirement, and the demand of efficiency.

If the hospitals and physician anesthesia groups followed the recommendations of the IOM and allowed CRNAs to provide care to their full extent of their training in a collaborative practice, hospitals and taxpayers would benefit. Hospitals would benefit the cost savings from appropriate staffing of providers

and avoid costly anesthesia contract stipends. Surgeons would not have to spend expensive operating room time waiting to meet the requirements for billing. Patients would have safe, proven anesthesia providers. Healthcare costs would decrease.

The most underserved and critical areas of our state benefit from the utilization of CRNAs to their full extent of their training. Rural communities, the military, reproductive health clinics, drug and alcohol rehabilitation and treatment facilities, endoscopy centers, cataract surgery centers, VA hospitals, and pain management clinics have embraced the CRNAs to provide care to their patients. The record of safety and cost savings has been proven. Anesthesia assistants cannot work in any of these circumstances because of the appropriately mandated anesthesiologist supervision.

For billing and revenue generation models, please see the below article:

https://www.oregon-crna.org/application/files/7315/8388/0794/Cintina_Nursing_Economics_2018.pdf

Higher Level of Education and Training

In 2004, the American Association of Colleges of Nursing stated that the Doctor of Nursing Practice (DNP) is the single-entry degree to practice. In accordance to the IOM report, Washington state's sole nurse anesthesia program graduates their students with a DNP. The process of earning the degree begins in nursing school, often multiple years of intensive care unit experience, followed by their higher education. This trend continues throughout the CRNA profession, through a variety of advanced degrees (JD, PhD, EdD, DNP, etc).

Many registered nurses, myself included, had to leave Washington State to attend a nurse anesthesia program. The exporting of home-grown talent to other states, is a tremendous loss to the communities for which we wish to serve. While I was fortunate to return, many of my former ICU colleagues could not find employment or established residency elsewhere. This struggle continues for student nurse anesthetists (SRNAs) still today.

The IOM recommends higher level of education and training. Another solution to the proposed workforce concern is expanding the top-ranked Gonzaga nurse anesthesia program or the development of an additional nurse anesthesia program elsewhere in the state. While clinical sites to prepare these students is a known challenge, it should be noted that hospitals and anesthesia groups restrict the access to needed for SRNAs. Expanding Gonzaga University's program or a second school would retain the talent of Washington State's nurses. Patients and communities would benefit with their continued residency; the anesthesia workforce need would be met.

Partnership in Redesigning Healthcare in the United States

I am currently earning my EdD in Interdisciplinary Leadership from Creighton University. I am a CRNA that practices interdisciplinary care, recognizing that the patient is the most important person in the operating room. Many organizations and disciplines, including the World Health Organization (WHO), Association of periOperative Registered Nurses (AORN), and Joint Commission, promoted the implementation of the Surgical Safety Checklist. The adoption and acceptance of this movement reduced medical errors and saved lives.

Anesthesia providers are problem solvers. It is in our nature to consistently explore methods to offer better service, improve our anesthesia practice, or learn a new skillset. For instance, to decrease the

incidence of opioid addiction, many anesthesia providers practice an opioid-sparing or opioid-free technique. We do our part to help in the current opioid crisis.

The IOM recommends that nurses should be full partners, with physicians and other health professionals, in redesigning health care in the United States. I believe that various opinions focused on problem can create a stronger, cohesive resolution, as opposed to solutions voiced from a singular party. WANA and WSSA worked together with WAPA, as stakeholders, to develop the physician assistant (PA) anesthesia education requirements. The interdisciplinary approach was effective, with result of a third anesthesia provider.

The collaborative efforts of interdisciplinary stakeholders are not present in this Sunrise Review Bill promoting the licensure of anesthesia assistants. This is unfortunate. Many of us work together in a supportive, collegial fashion, focusing on safe patient care. Tax payer funds, especially as we recover from COVID-19, should not be utilized for problems that can be solved without state legislation or DOH involvement. I am confident that WANA, WSSA, WSHA, WASCA, and other stakeholders can find a much less burdensome and more frugal solution other than a fourth anesthesia o provider. Especially when the licensure that does not increase access to care in many regions of need in our state.

As a CRNA and an advocate for access to care for all those in Washington, I ask that the Department of Health reject the application of licensure of anesthesia assistants. In this time of economic recovery, the COVID-19 pandemic, behavioral health needs, and rural access to care, the licensing of a fourth anesthesia provider is costly to the taxpayer, while not providing access to the areas of the state with the greatest need.

Comment Submitted By: Jesse Barker

I am writing to ask that you reject the sunrise review application for anesthesia assistants. They will not improve access to care as they are required to work with and under the direction of a physician anesthesiologist. This increases the overall cost of anesthesia due to the need of having 2 providers instead of just one. Additionally Certified Registered Nurse Anesthetists already independently cover the majority of not only rural Washington, but rural communities across the country without the need of additional providers. I ask that you reject the application for the AA team model as it is more expensive without any increase in safety.

Comment Submitted By: Evan Koch

Anesthesiologist's Assistants do not extend care to Washington citizens who otherwise might not get it. That's because they cannot work without anesthesiologists, and because they are no more cost effective than other providers: CRNAs and MDAs.

I therefore urge you to REJECT the sunrise review application of anesthesiologist's assistants.

Comment Submitted By: Valerie Eastman

I strongly urge you to reject the sunrise review application regarding licensure for anesthesiologist assistants (AAs). They do not improve access to care in Washington and they are not a tried-and-true

provider. I will be extremely concerned about healthcare safety and costs in this state if they are allowed to practice.

Comment Submitted By: Meleaha Viergutz

My name is MeLeaha Gutierrez, I am currently an SRNA in Nebraska and will be graduating in May of 2022. I will be moving to Seattle Washington when I graduate I. My husband is a Seattle firefighter so I will be joining him out there. I heard that there is potential workforce issue and was encouraged to reach out. I am extremely excited about joining the CRNA profession and practicing in Seattle. I have fallen in love with the wonderful city of Seattle and have found that even in a big city there is a sense of community. I believe CRNAs bring so much to the practice of anesthesia and I can't wait to be a part of this profession within the next year. Please let me know any help I can provide in the future.

Comment Submitted By: Tindol, Kristine A.

Please accept this comment in support of Anesthesiologist Assistant licensure in Washington State. If I may contribute any further, please let me know.

Comment Submitted By: Ewa Korzeniowska

My name is Ewa Korzeniowska. I am a Certified Registered Nurse Anesthetist. I have been a nurse since 2010, graduated from Pacific Lutheran University in Tacoma WA in December 2009. I worked as an ICU nurse at St Joseph medical center prior to becoming a CRNA (Certified Registered Nurse Anesthetist).

It was brought to my attention that WA state needs more anesthesia providers. From my experience Washington State job market for CRNAs is one of the most difficult. Not many carrier opportunities available. I would love to come back to WA state to work and live.

Comment Submitted By: Aaron Hall

My name is aaron hall I live in Spokane. I have been a CRNA for 8 years.

As my governing/elected officials, I am asking you to reject legislation allowing licensing of Anesthesia Assistants.

I love providing anesthesia, it is a unique time in someone's life where they require someone to be by their side to help ferry them through surgery.

I'm sure you have heard from my association and colleges. I can echo less eloquently what they have said.

I hope the recent pandemic has shined a light on our worth, our ability to transition from operating room, to critical care, with our understanding of managing patients on ventilators.

If you have any questions, or would like to share your thoughts- I welcome the conversation.

Comment Submitted By: Dennis Johnston

You've heard it all before. AA="Bad Health Care".

Comment Submitted By: Hunter Schulz

My name is Hunter Schulz and I am a CRNA practicing in the State of Washington. I have practiced and trained at some of the top institutions in the world (Mayo Clinic, Johns Hopkins and Cleveland Clinic). I've worked in varying models of anesthesia ranging from Medical Direction to Independent practice to the sole anesthesia provider in the facility.

Currently, I work at Harborview Medical Center working in a Medically Directed Anesthesia Model where an Anesthesiologist directs the anesthetic using TEFRA rules for billing. I feel I may have an interesting insider perspective due to my current workplace and experience. I will share some of what I know. I have also shared this information to our hospital leadership. Many are unaware of the specifics and requirements for the billing term of Medical Direction in an Anesthesia Care Team (ACT). Please allow me to offer some background. Below is the list of TEFRA rules mandated to bill appropriately under Medical Direction. Missing any of these rules in this model is considered fraudulent billing by Medicare.

1. Perform the pre-anesthetic examination and evaluation of the patient.
2. Prescribe the anesthetic plan.
3. Personally participate in induction, emergence and other aspects of the anesthesia plan.
4. Any procedures not performed by the physician must be done by a qualified anesthesia provider.
5. Monitor the anesthesia administration at regular intervals.
6. Remain physically present and available for immediate diagnosis and treatment of emergencies.
7. Provide indicated post-operative anesthesia care.
8. Documentation in the anesthesia record of the above.

When I first heard about these rules several years ago I considered how we hardly ever meet these criteria at the University of Washington or at Harborview Medical Center. I began learning and researching about this topic, engaging my colleagues in the issues at hand, and speaking directly to those in hospital leadership (CEO, Chief of Anesthesia, Chief CRNA, Billing Compliance Officer and others) about the fraudulent billing for almost every single case. Several CRNA's began taking note of violations and it was initially found to have over 75% of cases incorrectly billed based on our personal observations. I compared our unofficial findings to recent research that was written by an anesthesiologist was published in the American Society of Anesthesiologists newsletter. It discusses the huge issue in regards to the inability to provide the care they bill for in a Medically Directed Model. This specific research focused on a teaching institution using Medical Direction in the United States and reviewed 15,656 cases. Results found "Even at a ratio of 1:2 (One MD to two CRNAs/Residents), there would have been at least one such lapse in supervision for 35% of days (lower 95% confidence limit = 30%). At a ratio of 1:3 (One MD to three CRNAs/Residents), there would be supervision lapses on 99% of days (lower 95% confidence limit = 96%)." As such you can see the huge amounts of fraudulent billing that occur using the Medical Direction Model and this model doesn't even address all aspects of TEFRA, so we can assume it would have an even higher failure rate (Epstein 2012).

This study's location is very comparable to many hospital systems in Washington such as Harborview/University of Washington where medical direction exists. The challenging aspect of this is that CRNAs are trained to be independent providers, we are able to practice independently or in a supervised model. Data demonstrates that we provide the same level of care without risk to patients. According to a 2010 study published in the journal Nursing Economic\$, CRNAs acting as the sole anesthesia provider are the most cost-effective model in anesthesia delivery. There is no measurable difference in the quality of care between CRNAs or anesthesiologists, despite anesthesia delivery model.? ?Researchers studying anesthesia safety found no differences in care between nurse anesthetists and anesthesiologists based on an exhaustive analysis of research literature published in the United States and around the world (Lewis 2014).? Most recently, a study published in Medical Care (June 2016) found no measurable impact in anesthesia complications from nurse anesthetist scope of practice or practice restrictions.

Clearly, is a solution to our provider shortage exists, but licensing Anesthesiology Assistants is not the answer as they are required practice in a Medically Directed Model. When considering the research presented, this can potentially place a large portion of our Washington citizens to become victims to fraudulent billing.

Speaking specifically to my practice in a Medically Directed Model, there have been days where the Anesthesiologist would not come into the room for the whole case, not do preoperative interviews, not discuss any plan, not be present for induction, not be present during emergence, not be available for immediate consultation during the case, and at times not even in the hospital for the cases they were charting. These issues do not only occur with "bad apple anesthesiologists," but anesthesiologist colleagues who show up every day doing their best, working hard to help people, and be an active participant of the team. The ability to properly bill patients in this model run in the most efficient way (one anesthesiologist to four CRNAs) is not possible and struggles to be successful even at a rate of one anesthesiologist to two CRNAs. There are huge fines attached to each of these injunctions that can cripple a hospital system. Many hospital systems as we know are already struggling due to a decrease in reimbursement rates and the impact of COVID 19. Federal penalties for fraudulent billing can total three times the amount of the claim, plus fines of \$5,500-\$11,000 per claim. State laws include possible imprisonment, in addition to fines of \$5,000-\$10,000 per claim. Due to all of this, we cannot expect Anesthesiologist Assistants to relieve any access to care for Washingtonians when they are mandated to practice under Medical Direction and in an Anesthesia Care Team. As a result of these findings and the issues occurring in our system The State Attorney General was involved as well as anesthesia consulting groups, lawyers, compliance officers etc etc. prompting past and up coming changes to our system and how care is delivered and billed.

Whether It be in a rural setting, office-based procedure, ambulatory surgery center, or world renowned medical center, I am proud to be a healthcare provider, CRNA, and patient advocate that ensures safe, cost-effective care to patients in the WAMI region. Adding a fourth licensed anesthesia provider, that is restricted in practice settings, does not increase access to care. When considering the potential violations of Medicare fraud evidenced by public scientific studies, the solution to a potential workforce problem is not complicated or challenging when you allow CRNAs to work to their full scope of practice by altering the hospital policies to a supervised, collaborative, or independent anesthesia models.

Epstein RH, Dexter F. Influence of supervision ratios by anesthesiologists on first- case starts and critical portions of anesthetics. *Anesthesiology*. 2012; 116:683-691.

Lewis SR, Nicholson A, Smith AF, Alderson P. Physician anaesthetists versus non-physician providers of anaesthesia for surgical patients (Review). *The Cochrane Library*. 2014, Issue 7

Comment Submitted By: Ed Schlittenhart

I urge you to reject the sunrise review application regarding licensure for anesthesiologist assistants (AAs). As the father of a CRNA, I have watched the extensive training that my son received in school. I want whoever works on me or a family member to be highly trained and skilled in their practice. CRNA programs provide such training.

Thank you for your consideration.

Comment Submitted By: Charles Darling

14 July 2021

As a certified registered nurse anesthetist (CRNA) and a member of the Washington Association of Nurse Anesthetists (WANA), I urge you to reject the sunrise review application regarding licensure for anesthesiologist assistants (AAs). I have served in the military for the past 37 years both on active duty and in the US Army Reserves in which 21 years has been as a Certified Registered Nurse Anesthetist (CRNA). I have completed 4 combat deployments to both Iraq and Afghanistan. CRNAs in the United States military are the only anesthesia providers to provide anesthesia in austere combat settings such as on Forward Surgical Teams in Afghanistan, Iraq, Syria, and Africa to name a few, because of their ability to be very versatile and ability to practice independently

I have also deployed overseas for the past 2 years as a contractor for the government in which I am the sole anesthesia provider. AAs are not recognized in the military nor are they allowed to practice in military hospitals as a federal employee. They are unable to practice independently or autonomously and require the direct supervision of an anesthesiologist which does not make it cost effective.

It makes no sense to authorize AAs, a less qualified anesthesia provider that can only work with anesthesiologists and can't be used in any area where anesthesiologists don't practice, such as many rural locations. Please reject the application for licensure of anesthesiologist assistants.

Comment Submitted By: Mark vojtko

You have been lied to by the Physician Anesthesiologists in your State! Anesthesiologist Assistants will be a decision you will regret.

Why did I refer to Anesthesiologists as "Physician Anesthesiologists"? Allow me to explain. There are four anesthesia providers within our country that deliver anesthesia in an autonomous manner and bill independently for their services: Physician Anesthesiologists, Nurse Anesthesiologists, Dental Anesthesiologists, and Veterinarian Anesthesiologists.

It is important to understand that the prefix identifies the foundational experience and training of the provider, and anesthesiologist defines the specialty care provided.

Dental and Veterinarian Anesthesiologists are beyond the scope of my letter to you, so I will not address them further.

Notice I did not include Anesthesiologist Assistants? They are not autonomous providers and merely political pawns for Physician Anesthesiologists.

Because of the educational preparation, proven safety record, and outcomes that are on par with Physician Anesthesiologists, Nurse Anesthesiologists (AKA: Certified Registered Nurse Anesthetist or CRNA) are the sole reason that your rural community hospitals remain open and continue to serve their communities. Bodies are not piling up in the hallways as Physician Anesthesiologists will claim-it's just another lie to secure their extraordinary salaries.

Physician Anesthesiologists are not reimbursed at a higher rate than other providers- all anesthesia procedures are reimbursed at the same rate regardless of the provider.

An autonomous Nurse Anesthesiologist provides the same level of quality and safety of either an autonomous Physician Anesthesiologist or a care team that is medically directed by a Physician Anesthesiologist. 20+ years of retrospective evidence proves this.

Medically Directed anesthesia care is EXPENSIVE and does not provide any higher level of quality. Anyone making this claim is lying to you.

Physicians like the implementation of Anesthesiologist Assistants- a person in the room, watching the monitor, and calling for help when the "bubble isn't between the lines".

You should be terrified of this practice model. Anesthesiologist Assistants cannot make independent decisions, cannot practice autonomously, and must be 100% medically directed by a Physician Anesthesiologist.

In the middle of the night when a patient has a bowel obstruction or a laboring patient requires an epidural for labor pain control, an autonomously practicing Nurse or Physician Anesthesiologist can each handle the matter autonomously and an AA cannot.

Introduction of Anesthesiologist Assistants will not improve access. They will increase costs (because they require 100% supervision) and they will also increase your insurance premiums. Your rural communities will not be better served and small hospital's bottom line will increase exponentially.

If you want to increase access to anesthesia services, remove all hospital-level medical direction requirements and allow Nurse Anesthesiologists to practice in an autonomous manner to the full extent of their licensure and training. To further facilitate access, get Physician Anesthesiologists into operating rooms and have them take care of patients like they were trained to do.

Inclusion of Anesthesiologist Assistants is a mistake that you don't want to have your name affixed to.

Please contact me should you require further information. Thank you in advance for your decision to provide optimal and cost effective care to your citizens.

Comment Submitted By: Lauren A Platt Director, Government Relations Washington & Montana
Providence | Swedish Health Services | Kadlec Regional Medical Center | Pacific Medical Centers

On behalf of Providence and our secular affiliates Swedish and Kadlec, I would like to submit our support for the creation of an Anesthesiologist Assistant license in Washington state. We are currently amidst a significant staffing shortage for health care workers across health care settings, and have noticed a very tight market for Anesthesiologists. As care needs of communities across WA increase (which they are projected to do as the population ages), demand for care anesthesia support in our ORs and OR locations will also continue to rise. In addition, we have noticed that patient acuity is increasing – in other words, patients are coming to us sicker and sicker – and need anesthesia support in areas where procedural sedation was previously enough. Adding AAs would allow us to continue to offer more anesthesia support and services to patients across the communities that we serve.

Thank you for your consideration.

Comment Submitted By: John Weisbrod CRNA, MAE, ARNP

As a long tenured practicing CRNA and educator I urge you to reject the sunrise review application regarding licensure for anesthesiologist assistants (AAs). I believe I have a unique perspective to provide the committee. As a CRNA practitioner I have 38 years of clinical experience. Additionally I have been the Clinical Director of the Gonzaga University/Scared Heart Medical Center School of anesthesia from 1988 to 2019.

My own background that led me to even consider a career in Nurse Anesthesia was that of an experienced emergency room nurse for 3 years and 3 years as a critical care nurse in a major regional burn center. If you can imagine for a moment, all the organ systems that are affected by a critical burn injury. It is the heart, lungs, brain, kidneys, in fact organ systems are affected. While burn care has advanced since my tenure, a large critical burn still carries significant morbidity and mortality. Now imagine yourself being in the situation of caring of these individual(s) for 8 to 12 hour shifts monitoring all these organ systems, managing ventilators and titrating extremely potent medications. That immediate bedside care, taking care of the minute by minute changes that occur in these critically ill patients, is what has made nurses successful in the administration of anesthesia. All nurses that enter anesthesia have to have that acute, bedside critical care experience. Even our physician colleges do not have that extensive, beat to beat, bedside care of critical patients day in and day out.

As part of my tenure administering a school of anesthesia I examined what qualities I was looking for in a potential applicant to our anesthesia program. After consulting with a clinical psychologist, we came up with a simple list. We obviously wanted the applicants to be an expert at their chosen critical care skills, we wanted them to possess what we now call "emotional intelligence", a term not known at that time. We wanted them to possess excellent communication skills and function well in "crisis management mode". We needed to see that they were capable to handle an intensive educational program lasting between 2 to 3 year (current length of the Doctor of Nurse Anesthesia Practice programs). To that end the application and interview process was initiated to gather this information about the potential applicants.

I can honestly say that I have been honor to help educate the "best of the best" critical care nurses that have been admitted into the Gonzaga/Sacred Heart Program! All of these attributes and experiences have lead nurse anesthetists to function in any and all clinical settings, from major medical centers, outpatient clinics, dental offices, plastic surgery centers and importantly critical access hospitals. And as I am sure it has already been pointed out, in these practices, it is not necessary to function under the direction or supervision of a MD anesthesiologist.

I do not believe it is in the best interest of the residents of Washington state to accept an anesthesia provider that can enter the field without any medical/nursing/healthcare background prior to anesthesia training. WHY would you??

I offer my unique experience and perspective on this issue to the Committee. Please do not hesitate to contact me if you need further clarification or you have any questions on the educational and clinical aspects of Nurse Anesthesia education.

Comment Submitted By: James Grier

My name is Grier James. I am a certified anesthesiologist assistant and I currently live in the great state of Washington and have lived here for over 3 years. I relocated to Washington in April of 2018, due to my spouse's job opportunity. I currently work as an Anesthesiologist Assistant (AA) at WellStar Atlanta Medical Center and Northside Surgical Center in Atlanta, Georgia as Washington doesn't recognize my license or skill set currently. I have to travel to Atlanta, GA to practice my profession and skillset, and be away from my family so I can help to support them financially.

I am here to testify in strong support of the sunrise application for the licensure of anesthesiologist assistants in Washington, which would authorize the support for legislation to license and regulate anesthesiologist assistants also known as AA's. Enactment of this measure would provide the residents of Washington, my family and friends, access to the benefits AAs currently provide—benefits that patients in 18 jurisdictions already receive from AAs today. I, along with my other AA colleagues, provide high quality and affordable anesthesia care to our patients.

I received my undergraduate degree from University of Georgia and I completed my Masters of Medical Sciences in Anesthesia, to become an anesthesiologist assistant, at Emory University, graduating from the school of medicine. Upon completion of my training, I worked at Atlanta Medical Center hospital in Atlanta, Georgia and various outpatient Surgical Centers for 14 years, until I relocated to Washington. I wanted to work as an AA in Washington but due to the state not recognizing my profession, I haven't been able to. I have been a practicing AA for over 3 years.

I was able to join forces with Washington State Department of Health when the call of volunteers due to the COVID-19 pandemic was issued. My credentials were verified and approved to provide Healthcare services in Washington in the same scope of practice as my current valid, unencumbered state-issued, GA, license. I have also worked globally, specifically in Guatemala, when there was a need for AA to serve children of families in need of medical care through HUGS Foundation.

I, as an AA, am a highly trained anesthesia provider with a master's degree who ensures I provide high quality anesthetic care to my patients regardless of their background or ability to pay. I work alongside my physician anesthesiologist colleagues under medical direction to implement anesthesia care plans. I

work exclusively within the anesthesia care team (ACT) environment, meaning patients will always have two brains, two sets of hands and two sets of eyes involved in their care.

All AAs possess a premedical undergraduate background and complete a comprehensive didactic and clinical program at the graduate school master's degree level. The typical AA master's program is 24 to 28 months. We are trained extensively in the delivery and maintenance of quality anesthesia care as well as advanced patient monitoring techniques. We understand all the disease states, pharmacology and all other factors that can influence anesthetics and ensure we provide high quality care to our patients. In multiple states, we were utilized during the Covid Pandemic to assist with the management, breathing device placement and invasive line placement of critically ill patients.

My profession is an established profession that has been serving patients for over five decades, we have been around since 1968. AAs are recognized by the Centers of Medicare and Medicaid (CMS), Tri-care, and all major commercial insurance payors. CMS recognizes AAs as qualified non-physician anesthesia providers, just like our nurse anesthetists (CRNA) counterparts. AAs are as safe and effective as nurse anesthetists.

There is no peer-reviewed or other credible evidence of any sort that the care provided by an anesthesiologist assistant is less safe than that of a nurse anesthetist. In October of 2018, there was a study published in the reputable Journal, Anesthesiology, that concluded "The specific composition of the anesthesia care team was not associated with any significant differences in mortality, length of stay, or inpatient spending."

As a practicing CAA for 14 years and a Washington citizen, I strongly encourage your support of the Anesthesiologist Assistant Sunrise Application for legislation of AA's so Washington patients, including my family and friends, can benefit from the highly trained care AAs provide. I would love to be able to work in the state I call home!

Thank you for your consideration.

Comment Submitted By: Scott Boss

Recently, I was made aware that the state of Washington is facing the potential of having a shortage of anesthesia providers.

I am a practicing Certified Registered Nurse Anesthetist with 15 years experience, being board certified my entire career. I have worked in Illinois, Indiana, Texas, Liberia and with the US Army in Kuwait and Afghanistan.

As an Advanced Practice Registered Nurse in Texas, I have no required supervision and have prescriptive authority privileges. I have been a registered Professional Limited Liability Corporation since 2012.

I have worked independently and without physician supervision in many different states, countries, and circumstances; even in the most austere conditions and under enemy fire.

My interest to practice in Washington has piqued when visiting the area with friends who own property and spend considerable amounts of time there. My family and I have visited more than 4 times in summer and winter and have looked at purchasing property in the locale.

My wife has just been accepted to nursing school and should finish in the next 14 months. She expresses interest in pursuing nurse practitioner education afterwards.

We are considering and interested in relocating to the area sometime in the next few years, once our kids are settled/finished in college. It is possible that our youngest could even attend university there.

I have relatives who have retired in Puget Sound, but we would look at living/working in the Spokane or Eastern part of the state.

We have much exposure to the state and culture and have no surprises on what to expect. I offer much experience and broad depth of capabilities from rural healthcare, healthcare to veterans and even incarcerated patients of all age groups. The majority of my care has been centered in ambulatory surgery centers, but I have experience in critical access hospitals, trauma teaching hospitals, and office-based settings. I am also able to work out of a backpack, off a running aircraft and off road vehicle and set up an operating table in any setting.

I can provide references and a copy of my credentials upon request.

Comment Submitted By: Sherena Ross

I am emailing in response to a request from Fedan, a CRNA currently practicing in Washington. She explained that her facility is experiencing a crisis in the lack of anesthesia providers. Their proposed plan is to recruit anesthesiology assistants (AA) to fill the gap due to a supposed lack of CRNAs interested in moving to Washington.

That is untrue, for myself and other providers I know of in my area in Texas. Personally I plan to leave the state within the year and have been looking into Washington state, along with other choice states across the country. I guarantee you, should salary, benefits, and practice environment align with my goals, I would gladly move to a state as beautiful in landscape as Washington.

Thank you for your time.

Comment Submitted By: Molly Mueller, CRNA

I have been informed about a projected workforce shortage in Washington state for anesthesia personnel. As an independently practicing CRNA in a different state, I have often been intrigued about moving to WA and practicing there. I have only ever vacationed in the beautiful state of WA but love the small community feel and closeness with nature. CRNA's are highly educated, highly trained providers with proven safety records no different from that of our Physician colleagues, with the added benefit of cost-effectiveness to lessen the burden on those whom we care for. Please take this into consideration when considering how to move forward with safe, cost-effective anesthesia care in your state.

Comment Submitted By: Matt Santiago, BSN, RN, SRNA

Hello, my name is Matthew Santiago. I am completing my first-year didactic education for the DNAP program at Mount Marty University in South Dakota. I have been made aware of a potential workforce shortage in Washington State and I would love to soon become a part of the solution to this anesthesia-related issue. I worked as a nurse for 9 months in Seattle and met many healthcare workers and

anesthesia providers. Washington is my primary aspiration for employment after graduation for its diversity, opportunity, and natural beauty. CRNAs are a critical component for providing access to anesthesia care. CRNAs continue to lower costs and are safe, as demonstrated in multiple studies. They are the number one anesthesia provider for the US military and the primary provider for anesthesia services in rural areas in much of the US. I enjoy my educational process and I am very excited to soon call Washington my home. Thank you for your time.

Comment Submitted By: bryce andrus

As a practicing Anesthesiologist in the state of Washington I am absolutely against any more scope of practice creep in our specialty. Unregulated independently practicing CRNAs have long been a problem in this state and this is another proposal to further diminish the importance of physician trained providers of anesthesia in the state of Washington. I practiced in Colorado when they started allowing anesthesiology assistants and the problems created by continued creep of practice scope by mid and lower level providers there has been marked! It is one of the reasons I no longer practice in Colorado. Stop diminishing the work of anesthesiologists and our rigorous training by allowing continued creep of practice by these lower level providers.

Comment Submitted By: slava sozonov

My name is Slava Sozonov and I am a student registered nurse anesthetist at Georgetown University. As I have been getting closer to finishing my clinical training, I have heard of potential anesthesia workforce issues in the state of Washington. Nurse anesthetists provide excellent, safe, and cost effective anesthesia care and I can't wait to officially join the profession here shortly. With that being said, I am actively looking for jobs in Washington and would be more than happy to help relieve this anesthesia provider shortage burden. Aside from the beautiful outdoors that Washington is known for, healthcare quality and accessibility is a big factor that attracts me to work in the state of Washington once I graduate.

Comment Submitted By: Laurie Noe

I am a Certified Registered Nurse Anesthetist interested in moving to Washington state to work. I find it curious MD anesthesia providers are trying to get Anesthesia Assistants to be providers in this great state by claiming there is an anesthesia shortage. This is a boldface lie that serves only their own financial interest. It is neither cost effective nor safe much less necessary in a state that is rarely lacking for anesthesia providers. Please don't fall for this propaganda campaign. Keep assistants out of your great state.

Comment Submitted By: Craig Knudtson

I am contacting you regarding a potential workforce issue in the field of anesthesia in Washington state. I am a Certified Registered Nurse Anesthetist (CRNA) and former Washington resident. My wife is also a CRNA who completed her training at Gonzaga University.

Both my wife and I loved our time in Washington and would love to live there and help alleviate any shortage of anesthesia providers that may be present.

At present, we currently live and work in an all CRNA practice in Iowa where we provide safe, cost-effective, and comprehensive care. This includes providing pain relief for laboring mothers, care for pediatric and geriatric patients, and chronic pain services aimed at helping to alleviate the ongoing opioid epidemic.

If there were more opportunities for CRNAs in Washington state we would love the chance to move back to the Evergreen State.

If you have any questions or would like to discuss these topics further, please feel free to contact me by phone or e-mail.

Comment Submitted By: Lori J Baldwin CRNA

I am reaching out because I heard you are in a CRNA/anesthesia provider shortage.

I would love to move to WA to help alleviate the shortage burden because I love your state and community efforts. I am very proud of what CRNA's bring to the community and to healthcare.

CRNA's are an incredible resource of highly educated, compassionate and cost-effective providers.

I am happy to help in any way. Thank you for your time.

Comment Submitted By: Larry Troshynski

I am a CRNA in Kansas with 20 years experience. My son moved to Seattle two years ago and I have been looking for opportunities to move to Washington ever since. I love the Pacific Northwest! I understand you are having potential workforce issues and I would love to help you with the high quality and safe anesthesia services I have been delivering for twenty years in rural areas of Kansas, Iowa and Nebraska.

Comment Submitted By: Joseph "Logan" Oldani, DNP, CRNA

My name is Joseph "Logan" Oldani and I am a CRNA practicing independently in IL. I came across some information about an anesthesia shortage in Washington state and am definitely interested in this area. I was at Fort Lewis for awhile as a young soldier and to tell you I fell in love with the Pacific North-West is an understatement.

Seeing that there is opportunity for CRNA's in WA, I would love to come out that way. I have family in the Tacoma/Puyallup area, but would be interested in basically anywhere there. I am going to be pursuing a pain management fellowship in the next year and would gladly bring that skill to the area.

CRNA's are the most cost-effective model of anesthesia and having a pain management practice (especially in rural areas) hugely benefits the population and facilities. I currently provide a multitude of regional anesthesia blocks from interscalenes, to genicular, to erector-spinae and everything in-between (and above/below).

Please let me know what information you need and I will be happy to talk to any facility or group that is interested!

Comment Submitted By: Dr. Jonathan Becker, Doctor of Nursing Practice in Anesthesia, University of Saint Francis Nurse Anesthesia

| | CRNAs | Anesthesiologists | AAs |
|--|-------|-------------------|-----|
| Ensure rural Washington access to anesthesia and procedures requiring anesthesia services | Yes | No | No |
| Covered by Medicare and commercial health plans | Yes | Yes | No |
| Validated by extensive peer-reviewed research in quality and patient outcomes | Yes | Yes | No |
| Medicare coverage permitted when students are involved in anesthesia services delivered by a qualified professional such as a CRNA or anesthesiologist | Yes | Yes | No |
| Anesthesia services allowed in all 50 states and DC | Yes | Yes | No |

I am a Certified Registered Nurse Anesthetist (CRNA) with my doctoral degree in anesthesia. I am contacting you regarding a potential workplace issue in anesthesia. I would love to move to WA to alleviate that burden. I have visited in the past and it is an amazing state with so much to offer. I have family that lives there as well, and they love it there. CRNA's are safe and the most cost-effective anesthesia provider in the United States. In fact, 43 states have legislation that does not require CRNA's to be supervised by a physician to safely deliver high-quality cost-effective care. Other alternatives to CRNAs can only practice in the direct supervision and delegation of a MD anesthesiologist making them a burdensome and costly option for anesthesia care. Not only are you paying \$200,000 for an anesthesia assistants' salary on top of it you are paying \$400,000 to \$500,000 for a MD anesthesiologist to provide direct supervision and delegation. Employing more CRNA's like myself is a cost savings of \$400,000 to \$500,000. CRNA's have been providing anesthesia for over 150 years and are proven providers in the military and every anesthesia setting across the country. I love the state of Washington and the residents that live there. Please consider me and others like myself as a solution to any anesthesia workplace problems.

Comment Submitted By: Kerri Lisi

I am very interested in working in the state of Washington as a CRNA. It is an incredibly beautiful state. As a CRNA that grew up in NY, trained in CA, and moved back to NY, I continually look for opportunities on the west coast. Specifically, I am interested in the state of Washington after visiting there several times. Unfortunately, the opportunities are limited. CRNAs can provide high quality, patient centered and community focused anesthesia.

Comment Submitted By: Joe Romero CRNA, US Army Veteran

I am writing to you regarding the sunrise proposal for anesthesiology assistants. I was bewildered to hear that anesthesiology assistants are even a consideration in the state of Washington when there are so many capable Certified Registered Nurse Anesthetists (CRNA) like myself and others that would love to live and work there. I grew up in Idaho, but spent many summers in central Washington visiting friends and family and have always wanted to live there. My wife works in the wine industry and has had ample opportunities for employment. However, my struggle to find a good job there has prevented us from moving for years.

For some perspective, I have ten years of experience in academic hospitals, tertiary medical centers, and critical access hospitals. I'm also an Army combat veteran and have provided anesthesia for oldiers during combat operations on forward surgical teams in the Middle East. I am capable of practicing to the full extent of my licensure and training in any environment - including fully independent anesthesia practices serving rural and underserved areas without physician anesthesiologists. This is something an anesthesiology assistant is not trained to do or capable of. Over the years, I've sought multiple jobs in Washington without success. I most recently interviewed for a job in Sunnyside. Unfortunately, it was not a good overall fit for my family situation. However, I also applied for a position at Virginia Mason Memorial in Yakima, but didn't get an opportunity for an interview. Interestingly, there are many communities throughout the state with hospitals that only employ/contract with physician anesthesiologists and exclude CRNAs altogether (Wenatchee, Walla Walla, etc). As with many industries, the best jobs are filled by word of mouth. I guess I'll just have to be patient.

If there is truly a need for anesthesia providers, there are plenty of CRNAs like myself willing and ready to work.

Comment Submitted By: Olivia Campbell, DMPNA, CRNA

I am writing because I have recently heard of a potential workforce issue in anesthesia in Washington. I understand that there is a perceived shortage of anesthesia providers. I am a Certified Registered Nurse Anesthetist, (CRNA). CRNAs have been providing anesthesia care in America since the civil war, and are highly trained, cost-effective healthcare providers. We are independently licensed, board certified, and able to provide anesthesia services to every patient population, anywhere that anesthesia is offered. We have thousands of hours of hands-on patient care during our training, and prior to acceptance into anesthesia school, the average critical care experience of applicants is 3-5 years.

I received a Doctor of Management Practice in Nurse Anesthesia degree from Marshall University in West Virginia, and have now been practicing for two years. I would be very interested working in Washington, as I know many of my colleagues would as well. My goal has always been to reside and work in the beautiful Pacific Northwest. I previously lived and worked as a critical care nurse in Seattle. Following graduation from anesthesia school, I applied for several positions as a CRNA in WA, but was never offered employment. In fact, I never got a response for most of the applications I submitted. I decided to remain in West Virginia and apply again as I gained experience.

I love working as a CRNA. I take pride my job, and I advocate for this profession because I believe patients deserve the best quality anesthesia care while keeping healthcare costs affordable. I want to work in Washington, and I know there are many other colleagues who feel the same way. I sincerely hope that more positions become available in the near future for CRNAs. I assure you, there is no shortage of anesthesia providers. There is a shortage of available employment.

Thank you for your time.

Comment Submitted By: Srinithya, MD

My name is Srinivasan Sathya, MD and I am an Anesthesiologist practicing in Florida.

I am writing to you in support of the recent proposal to allow Certified Anesthesiologist Assistants (C-AAs) to practice in the state of Washington in the anesthesia care team model. Although I do not practice in the state, I fully support the education, training, and incorporation of these highly trained practitioners into the workforce both nationally as well as within your own state.

I currently work in a hospital that trains hundreds of AA students from Nova Southeastern University, and I can vouch for their clinical safety, technical skills, and critical thinking skills. Myself and several colleagues are personally involved in helping train these individuals in all aspects of anesthesia care, from preoperative assessment, perioperative treatment in the operating room environment, as well as a wide range of technical skills such as intubation, IV placement, and spinal anesthesia placement. They would be able to fill any voids in your anesthesia workforce to ensure that your citizens are able to receive timely surgical care throughout the state. They already have a strong presence in the southeastern US and could make a strong impact in the Pacific Northwest.

Please do not hesitate to call or email me with any questions and I am looking forward to seeing this become a reality in the near future!

Comment Submitted By: Laura Molina, DNP, CRNA

My name is Laura Molina. I am a Certified Registered Nurse Anesthetist (CRNA) in beautiful, sunny Florida. It has recently come to my attention that there was a suggestion of lack of anesthesia providers in the state of Washington. This pains me to hear. It is also perplexing. My husband and I hope to eventually relocate to Washington permanently. As an ICU RN, I even applied for Washington RN licensure to work as a travel nurse and to begin the process of establishing residency. At that time, I hoped to attend CRNA school in Washington state and then to work as a CRNA there. Unfortunately, the market for CRNAs at that time was extremely tight and the risk of being unable to find a job in Washington after school was too great. As a result, I attended a three year Doctor of Nursing Practice in Nurse Anesthesiology program here in Florida. This means we gave the state approximately \$85,000 in tuition. Additional money for cost of living as well as housing during out-rotations for clinicals. When the time came to look for jobs, Washington was still extremely limited, especially for a new graduate. So, again, my husband and I deferred our dream of relocating to Washington. Since then, we have continued to feed Florida's economy, via the purchase of a home, vehicles, etc.

Fast forward to today. I provide anesthesia care for two anesthesia groups. One runs a collaborative model, where at multiple sites there is no physician anesthesiologist present at all. The other runs an

Anesthesia Care Team Model (ACT) where I work in conjunction with a physician anesthesiologist. This second site employs Anesthesiologist Assistants (AAs). They also typically use one physician anesthesiologist in conjunction with no more than 3 CRNAs or AAs. Our AAs do not provide labor and delivery services or open heart cardiac services. The AAs are completely ineligible to work at the first anesthesia group. They must ALWAYS have a physician anesthesiologist from whom they derive delegatory authority. They are unable to function independently in collaboration with a surgeon or proceduralist. They are unable to write their own orders for even basic medications during the perioperative period. Yet AAs at this second facility command the same salary as the CRNAs who are able to provide full service anesthesia with collaboration with a physician colleague who may not be a physician anesthesiologist. This means that the second facility has to subsidize physician anesthesiologist salaries and is extremely dependent upon government funding. This was only too evident during the COVID-19 pandemic.

I don't want to discuss the pandemic. We've all heard about it enough. Let's discuss the future of anesthesia care in Washington state. If there is really a shortage of anesthesia providers in Washington, don't you want to increase opportunities for full service providers of anesthesia such as CRNAs and our physician anesthesiologist colleagues? Bringing in AAs will not solve your problem.

Here is a simple example:

- In a facility that is using a mix of 10 CRNAs and 10 physician anesthesiologists in an independent practice model, that facility can provide 20 patients anesthesia services simultaneously.
- In a facility that is using a mix of 5 CRNAs, 5 AAs, and 10 physician anesthesiologists in an ACT model, that facility can provide a maximum of 17 patients anesthesia services simultaneously. Under CMS guidelines, 1 physician would be required to supervise 4 CRNAs, 1 to supervise 4 AAs, and 1 to supervise the other CRNA and AA. The other 7 physicians could then provide care to their own patients. A physician who is supervising may not run their own case at that time. Many facilities run a ratio of 1:3, which would reduce the patient load down to 16. This means a reduction of 20% in the services provided to patients!!
- In a facility that is using 20 CRNAs in an independent practice model, that facility could provide 20 patients care simultaneously...and the CRNAs typically work for 1/2 to 1/3 of the annual salary of their physician anesthesiologist counterparts. Meaning that facility provides the same care as the first facility but at a fraction of the cost.

I look forward to the day when I am able to come and practice in the state of Washington. I am excited to hear that there are new opportunities for CRNAs to provide excellent care to Washingtonians. Please let me know how I can help to make my family's dream of a Washington address a reality!

Many thanks.

Comment Submitted By: James Soler, CRNA / Valerie Soler, CRNA

I heard of a potential workforce issue in anesthesia... my wife and I would love to move to WA to help alleviate that burden!! We love WA, the community, our role as CRNA, we are safe, cost-effective been working for >10 years without one negative outcome.

We have family in Lake Steven's area, but haven't found work as it's been dominated by physician anesthesiologists only.

We will continue to seek employment in WA!

Comment Submitted By: Samantha Medkiff, MSN, RN

I have recently been informed that there is a potential workforce issue in WA. As a resident registered nurse anesthetist I would love to help with that burden. I am extremely fortunate to be a part of this rewarding profession, as CRNAs are safe and cost-effective. They are the sole anesthesia providers in nearly all rural hospitals, and the main provider of anesthesia to the men and women serving in the U.S. Armed Forces. Thank you.

Comment Submitted By: Justin Thibeault, PA, MPH

"Anesthesiologist assistants are currently practicing safely and effectively under the direction of physician anesthesiologists in 18 other states. Anesthesiologist assistants have advanced graduate degrees and are required to complete a comprehensive didactic and clinical program at the graduate school level. They are trained extensively in the delivery and maintenance of quality anesthesia care as well as advanced patient monitoring techniques. Under the guidance of a physician, anesthesiologist assistants administer drugs, obtain vascular access, apply and interpret monitors, establish and maintain a patient's airway, and assist with preoperative assessment."

This is nearly word-for-word the definition of the relationship between Physicians and Physician Assistants. Why have WSMA and Anesthesiology groups balked at working with and training PAs in the past? Interested PA programs could easily adjust their curriculum and clinical training to meet the requirements for the role of Anesthesia Assistant? Why are we creating ANOTHER nuanced medical provider? For 50+ years PAs have worked in every conceivable medical specialty and were created to help address access to medical care. It's in our profession's DNA. It's puzzling to me why Anesthesiologists have overlooked, or more accurately, denied PAs the ability to contribute to this stated shortage of anesthesia providers. I simply don't understand. It's not what is best for our patients.

Comment Submitted By: Bryan Tune, PhD, DNP, CRNA

My name is Bryan Tune and I am a practicing CRNA in the State of CA. I have been very interested in employment in the State of WA. I have applied to 2 positions in the last two years. I have 16 years of critical care anesthesia experience and hold two doctoral degrees in the specialty. I do hope that opportunities become available in the future. I hear there is a perceived workforce shortage, and I would be happy to assist with any shortage.

Comment Submitted By: Baha Muminov

My name is Baha Muminov. I'm currently in a CRNA school in the Midwest. My fiance also goes to CRNA school here in Ohio. I'm originally from Seattle. I have a strong ties to the community since my family lives in Washington. I've heard about a potential workforce issue in the near future in the state. We'd love to be a part of the solution when we graduate in about a year (August 2022). We plan to start looking for potential opportunities this fall.

Comment Submitted By: MICHAEL GRABACH, CRNA

I'm a board certified registered nurse Anesthetist & I've heard there's an anesthesia workforce issue. I would love to move to WA to help alleviate that burden, I love the state of Washington. I have a planned out vacation there this month in the beautiful state of Washington. I have been independently practicing safe, cost-effective anesthesia for 10 years & I would love an opportunity to work in the beautiful state of Washington. Please notify me of any opportunities.

Comment Submitted By: Dino Kattato, CRNA

In light of the current situation surrounding the anesthesia workforce review, where WSSA (Washington State Society of Anesthesiologists) is citing the need for AAs (Anesthesiologist Assistants) due to the lack of anesthesia providers, such as CRNAs (Certified Registered Nurse Anesthetists), is most unfortunate to hear. Not only would I love to work in Washington, so would many of my colleagues. State CRNA representatives have noted that several CRNAs are willing and wanting to work in the beautiful state of Washington. This would surely help solve the workforce issue that might not even exist, and if it does, qualified and highly skilled CRNAs can answer that call. Please consider tabling the need for AAs, and welcome the many CRNAs out there, wanting to come and live/work in Washington, with open arms.

Comment Submitted By: MARIE WEBER

As a RN I am writing to say NO to AA legislation in the state of WA. Please vote NO to any bill that comes before you.

Comment Submitted By: Amy M Nielsen BSN, MHS, CRNA

Hello, I am writing to voice my strong objection to allowing Anesthesia Assistants to practice in WA.

Anesthesia is complicated and our patient population becomes more sick every year. I have been doing Anesthesia for 30 years this year. It certainly commands a working, in depth understanding of ICU medicine. CRNAs have critical care experience, knowledge and in depth understanding of all physiological changes that happen with age, disease and most recently COVID. Occasionally, a relatively healthy person suffers an adverse reaction that would be lethal in inexperienced hands.

I am 100% certain that if you or you loved ones were having surgery, you would expect a well trained, experienced provider at the helm. I certainly would not have a procedure in a facility that employed AAs. We don't allow first assists to operate, why would we allow an AA to do anesthesia??

Hope this clarifies this confusing issue.

Thank you for your consideration in this matter. I am confident you will vote to strike this down!

Comment Submitted By: Deutsch, Nina

My name is Nina Deutsch, and I am the President of Society for Pediatric Anesthesia. I have attached a letter from our organization that is in full support of the Anesthesiologist Assistant licensure that you are reviewing. Please feel free to contact me with any further questions.

Comment Submitted By: Marc L. Reiswig, MD

This letter is in support of the Washington State Society of Anesthesiologists proposed licensing of anesthesiologist assistants. I am aware that they undergo extensive training, and furthermore perform their duties under the supervision of anesthesiologists.

Many other states have programs in place similar to what is currently proposed by the WSSA. Adding these individuals to the anesthesia pool will likely improve patient access by helping to alleviate the current anesthesia shortage.

As an Emergency Physician I have seen first-hand the issues that delayed surgical care can cause.

I believe that the Washington State Medical Association will likely have an opinion on this topic. I encourage you to seek that opinion out put significant weight on their opinion.

Thank you for the opportunity to comment on this issue. Again, I support the current proposal.

Comment Submitted By: Anonymous by request

I am writing in support of allowing Anesthesiology Assistants to gain licensure in the State of Washington. I strongly support the team model of anesthesiology which Anesthesiology Assistants participate. It improves patient safety and improves OR throughput.

I strongly support CRNA's and love working with them but there seems to be a shortage of qualified anesthesiology providers. Increasing the potential pool of anesthesiology providers will surely benefit patients and health systems throughout the state.

Many of my CRNA colleagues would be upset that I am supporting the practice of Anesthesiology Assistants because they view it as a threat to their jobs and careers. I would like to remain anonymous as a result.

Comment Submitted By: Richard Baxter, MD

As a surgeon I urge you to reject the sunrise review application regarding licensure for anesthesiologist assistants (AAs).

As the owner of a surgical practice, I work with CRNAs and anesthesiologists. Both practice as independent providers in my facility, and both provide safe and thorough care to my patients.

In the constantly evolving landscape of health care, two issues always at the forefront are access to care, and health care spending. Bringing AAs to the state of Washington will not increase access, and it will most certainly drive up state and federal health care costs, especially in the institutions that would theoretically utilize AAs. From an economic standpoint, it is not prudent to pay two anesthesia providers to take care of one patient.

Certified Registered Nurse Anesthetists (CRNAs) as well as anesthesiologists are autonomous anesthesia providers, and both provider types are highly trained to deliver safe, effective care to their patients. Because AAs require supervision and thus cannot function without the costly Medical Direction and Anesthesia Care Team (ACT) models. It is my understanding that ACT is the most expensive model of anesthesia care. These costs impact our patients and communities as they drive up the cost of care.

As a result of the AA supervision requirement, AAs cannot work independently in rural hospitals, which serve large geographical regions that are desperate for access to care. CRNAs are the only anesthesia provider in 72% of Washington's rural hospitals which leaves no function for the AA at those facilities. Rural hospitals are also often unable to match anesthesiologist salaries at larger, private hospitals, hence the preponderance of CRNAs in these rural positions.

It's time to move from an expensive and inefficient Anesthesia Care Team model to a collaborative, supervisory or independent anesthesia practice model. There is an ongoing and increasing need for surgical patients to have access to safe, cost-effective anesthesia care. I suggest, instead of the costly burden of licensing a new, dependent anesthesia provider, that you ask the hospitals to change their outdated policies that restrict the practice of independent CRNAs.

Comment Submitted By: Louis Potyondy, MD

I am a plastic surgeon writing for support of anesthesiologist assistants in Washington.

I have had extensive experience working with anesthesiologist assistants in other states and found them very valuable as part of the healthcare team.

Comment Submitted By: Brad Van Duker, M.D.

As a Board Certified Anesthesiologist and a member of Tacoma Anesthesia Associates in my 30th year, I am writing in support of the Anesthesiologist Assistant licensing proposal. In my practice and in several others around Washington, there is a great need for these providers. Through specialized training, they become licensed and are able to provide unique assistance to Anesthesiology practices. There are a host of cases in my practice where working under an Anesthesiologist supervision they could provide great patient care and could spare the more demanding cases for the Anesthesiologist. These particular cases do not require a Nurse Anesthetist and would provide greater flexibility for my Group and many others around this state. Our Group is currently hiring Nurse Anesthetists and I do believe in the team care model, the Anesthesiologist Assistant could enhance our practice.

In the other states where Assistants are licensed, it has been a great success and would be here also in Washington.

Please bring this added resource to our patients in Washington.

Comment Submitted By: Sam Schwegler

As a CRNA and a member of the WANA, I urge you to reject the sunrise review application regarding the licensure of AAs. AAs will do nothing to improve anesthesia care or improve access to anesthesia care for Washingtons. In fact, there is strong evidence that AAs will be a detriment to the quality of anesthesia care offered in Washington as well as considerably increase costs. AAs are dependent on anesthesiologist direction and require the anesthesiologist to be present for several key factors during a case that are difficult to predict and will slow down efficiency of operating rooms throughout the state.

CRNAs are a far superior mid-level provider for offering anesthesia care as CRNAs are able to offer care independent of anesthesiologist involvement or supervision. CRNAs have a proven record of offering safe and quality care. This is a reputation AAs are unable to attest. AAs have not been under any

significant scrutiny to evaluate their safety in any meaningful way. There is a reason that AAs are only allowed in 15 states. They have not been effectively proven.

When I was in Illinois I found out that several of the partner physicians I worked with on a regular basis had gone to the state capitol to lobby for AAs. This was a professional gut punch. These were physicians that I had worked with, taken with, and aollaborsted with for years. To be honest, this was a significant reason I left the practice. Please don't make the same mistake and insult all the great CRNAs in this state that are giving high quality safe care. Thank you for your time.

Comment Submitted By: Winston Choi, MD, Matrix Anesthesia, PS

As an anesthesiologist in Washington state, I would like to voice my strong support for the licensure of anesthesiology assistants. They are a proven, safe and effective means of improving patient access to anesthesia care, and have consistently maintained a commitment to the physician lead, team based care that is the gold standard for our specialty. I have personally worked with anesthesiology assistants in the VA health care setting and have been thoroughly impressed by their fund of knowledge, skill level and willingness to collaborate in the acute care setting.

Please consider advancing this proposal so that we may continue to seek the best outcomes for our patients.

Comment Submitted By: Trayston Frazier

I am currently in the process of becoming an Anesthesiologist Assistant at UMKC School of Medicine. My wife is from Washington and we would love to come back to the amazing state of Washington. It would be a great place to raise our four children. As I have been to many different hospitals training. I have seen how the anesthesia care team has made hospitals work more efficiently and provide more protection for the patients. Multiple sets of eyes are watching over one patient at a time and discussions are able to occur to help manage the patients safety under anesthesia. I have seen it save lives. Lives that potentially would haven't been saved if it were for the multiple set of hands to help manage codes. I greatly appreciate the consideration. We are eagerly waiting for the day for this great state to open up in order to help provide care the people.

Comment Submitted By: Nicholas R. Simmons, MD, Anesthesiologist, Anesthesia Associates, PS

I am writing to express my full support of the Washington State Society of Anesthesiology's (WSSA's) proposal to regulate the licensure of Certified Anesthesiologist Assistants (CAA's) for the practice of anesthesia in the state of Washington.

As illustrated in the WSSA's proposal, CAA's are very well trained and qualified health care professionals filling a crucial role in Anesthesia Care Team model delivery of anesthetic care in fifteen other states.

I have experienced the introduction of Anesthesiologist Assistants (AAs) while practicing in Missouri. As an anesthesiologist in community practice at a large suburban hospital in Missouri, I found AAs to perform seamlessly in a physician led Anesthesia Care Team model alongside Certified Registered Nurse Anesthetists (CRNAs). Certainly, the addition of AAs to our anesthesia staff allowed for a greater pool of

qualified personnel to provide anesthesia to our patients. This is and was especially important in a climate where there is often difficulty in maintaining adequate staffing levels to provide each and every patient with quality care due to shortage of physicians and CRNAs in a healthcare environment with ever expanding acute care needs.

Considering the current and expected future demand anesthesia coverage throughout our state, I do not believe that CRNAs will be negatively impacted by the introduction of AAs into our healthcare delivery system. On the contrary, CRNAs may perhaps find themselves with a larger pool of anesthesia care provider peers in which to share the workload where the Anesthesia Care Team model is in effect. And as CRNAs enjoy independent practice in Washington State and AAs are anesthesiologist supervised by definition, the introduction of AAs should have no impact on CRNA practice in facilities where there is no physician supervision — often rural or underserved communities. Introduction of AAs may even free up a greater pool of CRNAs to practice independently in locations where physician led anesthesia is currently unavailable, such as in many of our rural or underserved communities.

I strongly encourage acceptance of the WSSA's proposal to expand Washington State's anesthesia workforce via DOH regulation of CAA practice in our state.

Comment Submitted By: Matthew Schindler

These comment emails can be contextually fairly dry, therefore, I would like to point out a portion of this process I find extremely humorous. In their application request, in an attempt to show need, the Washington State Society of Anesthesiologists (WSSA) stated they surveyed their members (physician anesthesiologists). They claim their completely biased survey revealed “nearly all members who responded reported having multiple job positions open for anesthesiologists and most positions had been posted for months without being filled. One of the key barriers to having a sufficient anesthesiologist workforce is the length of time required for their education programs.” Never, in the history of medicine, has even 1 anesthesiologist claimed that an anesthesiology assistant (AA) is equal to that of a physician anesthesiologist. In fact, in their own application, AAs must always practice under the medical direction of a physician anesthesiologist. So, I am not sure why Washington State would seek to credential another provider that doesn't improve the shortage the WSSA claims their survey identified. Using a fruit analogy, they claim (through a completely biased process) to have an orange shortage, so they are looking to fill that shortage with apples.

Physician anesthesiologists often classify both AAs and Certified Registered Nurse Anesthetists (CRNAs) as midlevel providers. Though CRNAs can practice without the oversight of a physician anesthesiologist and are licensed in all 50 states, lets just say that the American Society of Anesthesiologists claims that both AAs and CRNAs are “midlevel providers.” If midlevel providers are the apples in the aforementioned example, a better study would be to examine if Washington State had enough midlevel providers. Without this identified need, why should Washington State add a provider that would maintain high health care costs unnecessarily?

This application should be rejected for lack of merit. Washington State has historically made many good decisions on behalf of its populace. Rejection of this application would be both wise and in the best interest of the citizens of Washington State.

Comment Submitted By: Hannsjoerg Hasche-Kluender, MD (Anesthesiologist ret.)

Thank you for the opportunity to comment on the request for Licensure of "Anesthesia Assistants" in the State of Washington. I have reviewed the documents you provided, i.e. the Request from the Legislature, the Draft Bill, the Applicant Report, and Attachments. The element that is lacking or opaque in all those documents is the question "WHO PROFITS" from this request for yet another allied health professional category; or, more brazenly put, is this just another [hostile conflict] between the anesthesiologists and CRNAs?

The latter have a well established track record, a history, - they have training facilities and schools, they have done a commendable job on the anesthesia care teams. So ,why reinvent the wheel?

Comment Submitted By: Christopher Finch, MD

As a practicing anesthesiologist in Tacoma Washington I support the addition and inclusion of Anesthesia Assistants to the Anesthesia Team Model here in Washington State. They would be a competent and reliable addition to our planned care team model at Tacoma General and Allenmore Hospital. Please advance the legislation necessary to allow for AAs to work in WA State.

Comment Submitted By: Craig Samford, MD

As an anesthesiologist who has trained and worked with both Certified Anesthesiologists Assistants (CAAs) and Certified Registered Nurse Anesthetists in Team Care Models across the US, I strongly recommend adding Certified Anesthesiologists Assistants to Washington’s list of recognized healthcare providers.

CAAs are well-educated, thoroughly trained professionals who strengthen the application of the Team Care model. Licensure of CAAs in Washington will allow increased access to safe, high-quality anesthesia care across the state.

I support the licensure of CAAs in Washington and would be honored to offer any testimony needed to support this recommendation.

Comment Submitted By: Braden Hemingway, DNAP, CRNA, ARNP

As a Washington state resident, certified registered nurse anesthetist (CRNA), board member of the Washington State Association of Nurse Anesthetists (WANA), and Assistant Program Administrator for the only Nurse Anesthesia program in WA, I strongly oppose the sunrise review application regarding licensure of anesthesiologist assistants (AAs). Washington is not suffering from a lack of anesthesia providers; it is suffering from the lack of fully trained anesthesia providers providing anesthesia. Both CRNAs and physician anesthesiologists are independent providers of anesthesia in the state of WA. Adding a dependent provider in the state of WA, AAs, would not only increase healthcare costs, but it would also prevent the current providers from all working to the full extent of their licensure. The shortage assumes that all practices will be practicing in a dependent model, aka anesthesia care team (ACT), which has been shown to limit job satisfaction, prevent physicians from actually providing anesthesia, and creating a perceived provider shortage. Instead of bringing in a provider that would perpetuate the inefficient and costly ACT model, it would improve access to care if our current providers were all working to the full extent of their licensure.

There are concerns with expanding the ACT model that include putting patients at risk, increased cost to the health system, and increasing the potential for fraud. To meet a medical direction model, 1:4 ratio of physician anesthesiologists to CRNA/AAs, the physician must meet the 7 TEFRA rules defined by CMS. If one of these rules is not met, the physician can not bill for medical direction. When a CRNA works in this model, if a rule is not met, they may bill QZ with CMS. This allows for the hospital to still recoup 100% of the billing. An AA can not be billed QZ, leaving the hospital at risk for either loss of billing, or fraud if it isn't reported correctly. Another concern is patient safety. If physician A is trying to assist in a room with CRNA #1 and an emergency happens in CRNA #2 room, the CRNA in room #2 is trained as a full practice provider and can handle the emergency on their own. If the reverse happened with two AAs, the AA in room #2 is trained as a dependent provider and is not able to function as a nondependent provider. And again, in this situation there would be loss of billing because the physician can not meet the TEFRA rules if they can not be available for all critical portions of both cases. This situation is mentioned in an article published in Anesthesiology by Epstein, et al. 2012; 116:683–691.
<https://doi.org/10.1097/ALN.0b013e318246ec24><<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fdoi.org%2F10.1097%2FALN.0b013e318246ec24&data=04%7C01%7Canesthesiology-sunrise%40doh.wa.gov%7C27dc441cc7584a7ebe1b08d93d9e5df5%7C11d0e217264e400a8ba057dcc127d72d%7C0%7C0%7C637608572658407356%7CUnknown%7CTWFpbGZsb3d8eyJWljiMC4wLjAwMDAilCjQljoiv2luMzliLCJBTiI6k1haWwiLCJXVCI6Mn0%3D%7C1000&sdata=FVUJUXYeAixmKFrwXiAtqXjd7OOLmKwuhsI5ZEw142g%3D&reserved=0>>

Both CRNAs and physician anesthesiologists are licensed to be full practice providers in the state of WA. Both can provide anesthesia completely independently. If both providers were working completely independently, there would not be a shortage of providers. It's the ACT medical direction model that limits both providers from working completely independently and providing full-service care.

Currently in WA, there is a perceived shortage of anesthesia providers. As on the program administrators at the one school in WA I can tell you this is not due to our department not being able to provide enough graduates. We have been increasing our cohort sizes over the past couple of years to help provide WA more CRNA graduates. At this time, the only limiting factor for us to increase our class sizes even more is the inability to gain access to clinical sites in the primarily ACT hospitals. We have

been trying over the past 2 years to gain access into the hospitals that would allow us to open a west side cohort but have been unsuccessful to get past the initial conversations. If allowed to get access to these sites, our next class would include a west side cohort. Adding more independent providers would increase access to care for WA states much more than adding dependent providers that would prevent physician anesthesiologists from providing anesthesia themselves. There are over 56,000 CRNAs in the country practicing anesthesia and approximately 1800 AAs. The answer to any provider shortage is more trained CRNAs, practicing independently, and more physician anesthesiologists providing anesthesia at the bedside.

The education that CRNAs receive during training is somewhat similar to AAs, however much more extensive and intense. The CRNA student brings years of intensive care unit (ICU) nursing experience prior to their anesthesia training. They are already licensed healthcare providers. They do not need to spend months of their training learning how to start IV's, assess patients, and care for critically ill patients one on one. In our program, they begin clinical rotations during their first semester due to the experience they already have. Their 36 months of training includes much of the same course work as AAs, but also 4 semesters of evidence-based practice and research skills. This course work teaches them to be leaders in healthcare and to provide the care based on the most current evidence. This includes learning how to critically evaluate literature. They also spend multiple rotations training and providing anesthesia in all anesthesia specialties.

The applicants for the sunrise review mentioned a study published in Anesthesiology titled "Anesthesia Care Team Composition and Surgical Outcomes".

<https://doi.org/10.1097/ALN.0000000000002275><<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fdoi.org%2F10.1097%2FALN.0000000000002275&data=04%7C01%7Canesthesiology-sunrise%40doh.wa.gov%7C27dc441cc7584a7ebe1b08d93d9e5df5%7C11d0e217264e400a8ba057dcc127d72d%7C0%7C0%7C637608572658407356%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAilCJQljoiiV2luMzliLCJBTiI6Ikl1haWwiLCJXVCi6Mn0%3D%7C1000&sdata=axj9OBh7xyHmL7hRuZZ9I4OEipxUEpmfwEtFbJmAX4g%3D&reserved=0>>. This study tried to compare outcomes between CRNAs and AAs.

However, it fails to meet scientific rigor. The article reviewed 443,098 cases, of which 421,230 were CRNA cases and 21,868 were AA cases. So, CRNAs represent 95% of the data used. This does not allow for statistical extrapolation of conclusions comparing the two professions. The student also did not compare anesthesia outcomes at all. The only conclusions they were able to compare were inpatient mortality, hospital length of stay, and inpatient spending. Inpatient mortality was trying to focus on patient deaths. However, nothing in the article has anything to do with anesthesia services. There are many factors related to inpatient mortality, not the least of which are surgical complications unrelated to anesthesia. Since this study did not control for any anesthesia, or non-anesthesia factors, there is no way to draw any conclusions between either provider. The article did show that the physician was unable to meet the supervision guidelines for medical direction 35% of the time, demonstrating the need to an independent provider in the room, rather than a dependent provider.

There is no reason for the state of WA to bring in another anesthesia provider, especially one that is unable to provide independent anesthesia care. If there is concern for a lack of providers in the state, it would be in the best interest of the state to increase the size of the current CRNA program and increase the number of already trained anesthesia providers, working in the state, to actually provide anesthesia.

Comment Submitted By: Stephen Lee, MD, Anesthesiologist

I am a 30 year practicing anesthesiologist in Washington and support the application for licensing Anesthesiologist Assistants in Washington State.

While I do work with Nurse Anesthetists (CRNA) on a routine basis, I do believe that the addition of Anesthesiologist Assistants (AA) will further help with both cost issues and care quality for patients needing anesthesia.

By having the full spectrum of anesthesia providers from MD to CRNA to AA, I will better be able to match the providers capabilities to patient care intensities and control patient care costs.

Because AA will be matched with MD, the care provided is essentially an extension of my current practice, care quality, and cost responsibilities.

I hope the regulatory bodies will take these perspectives into consideration for the application for licensing Anesthesiologist Assistants in Washington.

Comment Submitted By: Michael J. Bishop , MD, Professor Emeritus, Anesthesiology and Pain Medicine, University of Washington School of Medicine

I am the former Director of Anesthesia for the United States Department of Veterans Affairs. While in that position, I was involved in the approval of AA's for practice in the VA system. Our review of their qualifications and licensure in a number of states resulted in our finding that these were well-trained individuals that offered the ability to leverage the skills of anesthesiologists in providing care. I would very much encourage Washington to add our state to the many others that already license AA's.

Comment Submitted By: David C. Liu

Anesthesia Assistants are highly trained providers recognized by CMS and undergo extensive graduate-level training in the administration of anesthesia. They're formally recognized in 17 other states and perform key duties of a highly functioning anesthesia care team under the supervision of anesthesiologists. Not every group or facility need to employ them but having this option for Washington will be a safe and smart solution to projected shortages in health care providers, especially in the rural areas of Washington. Please support this safe option for our state.

Comment Submitted By: Dheeraj Ahuja, MD, MSHA, CPE, FACHE, Pediatric Anesthesiologist

I am in completely favor and support of approving licensure for Anesthesiologist Assistant in state of Washington. AA licensure will not only improve access to many citizens living in rural communities but also improve overall quality of care being delivered under physician-supervision.

Comment Submitted By: Vikas O'Reilly-Shah, MD, PhD, FASA, Associate Professor of Anesthesiology & Pain Medicine, Associate Chief for Perioperative Informatics and Outcomes, Seattle Children's Hospital, Director, Center for Perioperative and Pain initiatives in Quality Safety and Outcomes (PPIQSO), University of Washington | Seattle Children's Hospital

I am writing in strong support of the proposal to move forward with Anesthesiologist Assistant (AA) licensure in the State of Washington. I am an actively practicing pediatric anesthesiologist at Seattle Children's Hospital. I have had the benefit of working with a large number of AAs in the State of Georgia at Emory University and Children's Healthcare of Atlanta. My experience with these professionals was extremely positive in their role as physician extenders and when providing care under the medical direction of a supervising physician. In aggregate, the care provided by AAs was indistinguishable from the care provided by Certified Registered Nurse Anesthetists (CRNAs) in a physician extender role. Patients and families in the State of Washington will benefit by expanded access to a pool of trained anesthesia providers and the concomitant increased capacity for safe anesthesia care across the State. Increased capacity may also lead to reductions in the cost of care. As AAs are not requesting licensure for the independent practice of anesthesiology, patients and families can rest assured that the care provided by these professionals will always be overseen by an appropriately trained and credentialed physician during their procedural and surgical care. This also undercuts any argument that these professionals will compete in the marketplace with CRNAs, who are in fact licensed for independent practice in the State of Washington. In my view, there are no good arguments in favor of rejecting this proposal. I would be happy to comment on my experiences working with AA in further detail would it be of service. I should make it clear that these views are my own and do not reflect the views of my employer at any organizational level.

Comment Submitted By: Marc Hinckley, AA, MMSc

My name is Marc Hinckley. I am a certified anesthesiologist assistant and I grew up in Spokane, Washington. I graduated from Central Valley High School. I have family that currently resides in Spokane Valley and Camas Washington. I currently work as an Anesthesiologist Assistant (AA) at Northside Hospital in Atlanta, Georgia as Washington doesn't recognize my license or skill set currently.

I am here to testify in strong support of the sunrise application for the licensure of anesthesiologist assistants in Washington, which would authorize the support for legislation to license and regulate anesthesiologist assistants also known as AA's. Enactment of this measure would provide the residents of Washington access to the benefits AAs currently provide—benefits those patients in 18 jurisdictions already receive from AAs today. I, along with my other AA colleagues, provide high quality and affordable anesthesia care to our patients.

I graduated from Central Valley High School in Spokane. I got my undergraduate degree from The University of Utah and I completed my Masters of Medical Sciences in Anesthesia, to become an anesthesiologist assistant, at Emory University in Atlanta, Georgia, graduating from the school of medicine. Upon completion of my training, I wanted to return back to Washington but due to the state not recognizing my profession, I haven't been able to and settled in Georgia for the last 15 years. I have been practicing for 13 years.

I, as an AA, am a highly trained anesthesia provider with a master's degree who ensures I provide high quality anesthetic care to my patients regardless of their background or ability to pay. I work alongside my physician anesthesiologist colleagues under medical direction to implement anesthesia care plans. I work exclusively within the anesthesia care team (ACT) environment, meaning patients will always have two brains, two sets of hands and two sets of eyes involved in their care.

All AAs possess a premedical undergraduate background and complete a comprehensive didactic and clinical program at the graduate school master's degree level. The typical AA master's program is 24 to 28 months. We are trained extensively in the delivery and maintenance of quality anesthesia care as well as advanced patient monitoring techniques. We understand all the disease states, pharmacology and all other factors that can influence anesthetics and ensure we provide high quality care to our patients. In multiple states, we were utilized during the Covid Pandemic to assist with the management, breathing device placement and invasive line placement of critically ill patients.

My profession is an established profession that has been serving patients for over five decades, we have been around since 1968. AAs are recognized by the Centers of Medicare and Medicaid (CMS), Tri-care, and all major commercial insurance payors. CMS recognizes AAs as qualified non-physician anesthesia providers, just like our nurse anesthetists (CRNA) counterparts. AAs are as safe and effective as nurse anesthetists.

There is no peer-reviewed or other credible evidence of any sort that the care provided by an anesthesiologist assistant is less safe than that of a nurse anesthetist. In October of 2018, there was a study published in the reputable Journal, Anesthesiology, that concluded "The specific composition of the anesthesia care team was not associated with any significant differences in mortality, length of stay, or inpatient spending."

As a practicing CAA for 13 years and a Washington Native, I strongly encourage your support of the Anesthesiologist Assistant Sunrise Application for legislation of AA's so Washington patients can benefit from the highly trained care AAs provide. I would love to be able to return home and take care of patients in Washington.

Thank you for your consideration.

Comment Submitted By: Michael Shafer CRNA

Regarding Anesthesiologist Assistants: I would not recommend their appointment in Washington. Their scope of practice is limited in that they are only able to practice in a medically directed/supervised model. Without the ability to practice and bill independently, they do little to alleviate potential shortages of anesthesia providers in our state, and instead increase costs to patients and medical centers.

Unfortunately, their use is promoted by Anesthesiologists who are attempting to monopolize anesthesia practice in Washington. The American Society of Anesthesiologists and state and local chapters of anesthesiologists frequently engage in oppression and belittlement of Certified Registered Nurse Anesthetists (CRNAs). They claim to provide better care than CRNAs when the research proves otherwise. Washington Anesthesiologists are merely attempting to further discriminate against CRNAs and monopolize the provision of anesthesia services in the state of Washington. Real solutions would involve parity reform and protections promoting non-discrimination against CRNAs in the workplace.

Comment Submitted By: Michael Schneider, CAA

My name is Michael Schneider, AA. I am a Anesthesiologist Assistant and I grew up in Puyallup, Washington. I currently work as an Certified Anesthesiologist Assistant (CAA) at University of Florida Shands Hospital in Gainesville, Florida, as Washington doesn't currently recognize my license or skill set.

I am here to testify in strong support of the sunrise application for the licensure of Anesthesiologist Assistants in Washington, which would authorize the support for legislation to license and regulate Anesthesiologist Assistants. Enactment of this measure would provide the residents of Washington access to the benefits AAs currently provide—benefits that patients in now 19 jurisdictions (17 states + DC + Guam) already receive from AAs today. I, along with my other AA colleagues, provide high quality and affordable anesthesia care to our patients.

<https://www.anesthetist.org/about-caas><<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.anesthetist.org%2Fabout-caas&data=04%7C01%7CAnesthesiology-sunrise%40doh.wa.gov%7Ca80b0d5378a041b023fb08d937e00231%7C11d0e217264e400a8ba057dcc127d72d%7C0%7C0%7C637602257516049344%7CUnknown%7CTWFpbGZsb3d8eyJWljiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6I1k1haWwiLCJXVCi6Mn0%3D%7C1000&sdata=q4AuNCwERKIN5kA6r72u1fx7%2BqTD%2FAAA%2BnUNOp%2FeIrk%3D&reserved=0>>

After completing my training at Emory University School of Medicine and completion of a Master's Degree in Anesthesiology, I have taken jobs in the greater southeast US awaiting for an opportunity to move back up to Washington. I have been practicing for over 10 years in hopes to return home.

The anesthesiology job board indicates a significant shortage of providers in the state of Washington. Licensing us AA's would provide hospitals and practice groups another proven pool of applicants to help decompress the provider shortage and help patients with health care access in all counties of the state.

AA's have been practicing since 1968 in all types of practice settings--from rural health to urban academic tertiary hospitals. We have been on the front lines this past year managing airways and anesthetics with the COVID-19 crisis. AAs are recognized by the Centers of Medicare and Medicaid (CMS), TRICARE, and all major commercial insurance payors. CMS recognizes AAs as qualified non-physician anesthesia providers, just like our nurse anesthetists (CRNA) counterparts.

In October of 2018, there was a study published in the reputable Journal, Anesthesiology, that concluded "The specific composition of the anesthesia care team was not associated with any significant differences in mortality, length of stay, or inpatient spending."

As a practicing AA for 10 years and a Washington Native, I strongly encourage your support of the Anesthesiologist Assistant Sunrise Application for legislation of AA's so Washington patients can benefit from the highly trained care AAs provide. I would love to be able to return home and take care of patients in Washington.

Thank you for your consideration.

Comment Submitted By: Billington, Dustin

While it is important to provide access to anesthesia care for patients in WA state, there is no need to have anesthesiology assistants in WA state. It has been demonstrated multiple times over in multiple studies that anesthesia care is just as safely administered by a nurse anesthetist compared to an anesthesiologist MD. Safe, cost efficient anesthesia care is absolutely essential in this day and age. Nurse anesthetists can deliver safe, affordable, and independent anesthesia care. The cost of a nurse anesthetist vs an anesthesiologist MD is strikingly different. Anesthesiologist assistants cannot deliver independent care and must rely on anesthesiologist MDs. Compare the cost effectiveness of anesthesiologist MD only model vs anesthesia care team medical direction model vs independent nurse anesthetist model and the independent nurse anesthetist model is undoubtedly the most cost effective.

Comment Submitted By: Kamm, CAA, MMSc, 2021 AAAA President

On behalf of the American Academy of Anesthesiologist Assistants (AAAA), I'm writing to express our organization's support for approving the sunrise application to license anesthesiologist assistants (AAs) in Washington state.

The AAAA was founded in 1975 and we represent over 3,000 CAAs and student AAs. Certified Anesthesiologist Assistants (CAAs) are highly skilled, advanced practice providers who work in the Anesthesia Care Team (ACT) with licensed physician anesthesiologists to implement all aspects of anesthesia care plans. AAs provide high quality, safe, and affordable anesthetic care to patients in 19 jurisdictions. Please refer to the map included with this letter to see where AAs are currently practicing.

The anesthesiologist assistant profession is an established profession that has been serving patients for over five decades - we have been around since 1968. AAs are recognized by the Centers of Medicare and Medicaid (CMS), Tri-care, and all major commercial insurance payors. CMS recognizes AAs as qualified non-physician anesthesia providers, just like our nurse anesthetist (CRNA) counterparts. AAs are as safe and effective as CRNAs.

All AAs possess a premedical undergraduate background and complete a comprehensive didactic and clinical program at the graduate school master's degree level. The typical AA master's program is 24 to 28 months. AAs are trained extensively in the delivery and maintenance of quality anesthesia care as well as advanced patient monitoring techniques. AAs understand all the disease states, pharmacology and all other factors that can influence anesthetics and ensure we provide high quality care to our patients.

In multiple states, AAs were utilized during the Covid Pandemic to assist with the management, breathing device placement and invasive line placement of critically ill patients. They were deployed to ICU's and onto code and intubation teams to take care of patients while the world was in crisis.

Anesthesiologist Assistants provide high quality anesthetic care to patients regardless of their background or ability to pay. AAs work alongside physician anesthesiologist colleagues under medical direction to implement anesthesia care plans and work exclusively within the anesthesia care team (ACT) model, meaning patients will always have two brains, two sets of hands and two sets of eyes involved in their care.

The Washington State Society of Anesthesiologists (WSSA) and its membership, the physician anesthesiologists that we work alongside every day, support this initiative for AAs to be licensed in Washington. A recent survey of WSSA members indicated that 57% of practices have been trying to hire anesthesiologists, and 70% of those hiring had vacancies for 6 months or longer. Even though the 2019-20 physician supply estimates from the Office of Financial Management Health Care Research Center indicated a 4.9% increase in anesthesiologists in Washington, Washington still ranks 26th in the nation in a measure of the likelihood of a physician shortfall in the years ahead. Adding licensure of AAs in Washington will bring valuable health professionals that will help fill gaps in the workforce. The anesthesia care team model expands the medical treatment provided by anesthesiologists and equips the medical facility to serve patients more effectively and efficiently, which increases the access of care to citizens of Washington.

In addition, the Washington Medical Commission has recently proposed rules to regulate when physician assistants may administer anesthesia, which define adequate education and training for administering general and intrathecal anesthesia as “completion of an accredited anesthesiologist assistant program.” This highlights that AAs are a known and recognized health profession that practices in many places throughout the country.

According to the Health Workforce Employment Data from the Workforce Training & Education Coordinating Board, there are fewer than 1,800 anesthesia providers (anesthesiologists and CRNAs) currently practicing throughout Washington. Without AAs, health care facilities will continue to face potential workforce shortages to perform the duties of an Anesthesia Care Team, especially in rural areas. Adding AAs to the health care workforce in Washington will help increase the number of providers.

The AAAA and its thousands of members strongly support licensure for anesthesiologist assistants in Washington. AAs are highly trained and safe providers who work alongside physician anesthesiologists in the anesthesia care team. AAs are a smart solution to Washington’s health care provider workforce shortage to increase the access of care to all patients in Washington. Please don’t hesitate to contact us with any questions.

Comment Submitted By: Dr. James P. Ennen MD, MPH

I am writing to express my support for licensure of anesthesiologist assistants in Washington state. I am currently a 3rd year resident physician anesthesiologist at the University of Washington and hope to advocate for a bright future for our patients and providers in the field of anesthesiology throughout Washington state.

I believe the state should work to ensure a more robust health care workforce to help us meet patient needs. Seventeen states already allow anesthesiologist assistants to practice, and the federal Centers for Medicare and Medicaid also recognize them as anesthesia providers, as does the US Department of Veterans Affairs. They are well-educated and specifically trained to administer all types of anesthesia under the supervision of an anesthesiologist.

Based on my experience as a health care provider in our state, I believe licensure for anesthesiologist assistants would help patients, health care facilities, and the healthcare system as a whole. I urge the Department to support their licensure. Thank you for your time and consideration of this issue.

Comment Submitted By: Tim Clement, MD

As an anesthesiologist that completed my residency training in Washington and have continued to practice in this state for the past 5 years, I am asking for your support in creating a licensure pathway for anesthesiologist assistants in Washington state.

Anesthesia services are in increasingly high demand and there is a predicted shortage of physician anesthesiologists. Anesthesiologist assistants work in a care team model to maintain the highest level of care for our patients while maintaining or improving access to anesthesia services. Seventeen states already allow anesthesiologist assistants to practice. Anesthesiologist assistants are recognized by CMS and the US Department of Veterans Affairs as anesthesia providers. They undergo rigorous education and get the necessary training to administer all types of anesthesia under the supervision of a physician anesthesiologist.

Licensure for anesthesiologist assistants would help patients, health care facilities, and the healthcare system as a whole. I urge the DoH to support their licensure. Thank you for your time and consideration of this issue.

Comment Submitted By: Kathryn Wilson, CRNA

Good morning,

I'm writing you today to express my concern that Washington State is considering licensing Anesthesiologist Assistants (AAs) in our state. AAs are only licensed in a handful of states in the US due to questions about their safety of care and education. Anesthesia in Washington State is currently provided very safely either a Certified Registered Nurse Anesthetist (CRNA) or physician anesthesiologist. There are ample anesthesia providers to take care of Washington residents, and there is NO need to add an unproven, less educated entity to our state. AAs may have a degree in an entirely non-healthcare based field prior to attending AA school, whereas both CRNAs and anesthesiologists have medical based degrees. AAs cannot work independently without an anesthesiologist and cannot handle emergency situations alone. Anesthesiologists may supervise 4 separate AAs at any given time, and if an emergency were to occur while the anesthesiologist was handling another event, patients could seriously be harmed.

As a Washington State resident and CRNA who is very familiar with the dynamics at play, I urge you to vote no on this measure for the safety of all of our friends, family, and neighbors who call Washington home.

Comment Submitted By: Tony Tsai, MD, MBA

I am writing to express my support for licensure of anesthesiologist assistants in Washington state. I have been practicing as an anesthesiologist for the past 16 years and moved to Washington state in 2019.

I believe the state should work to ensure a more robust health care workforce to help us meet patient needs. Seventeen states already allow anesthesiologist assistants to practice, and the federal Centers for Medicare and Medicaid also recognize them as anesthesia providers, as does the US Department of

Veterans Affairs. They are well-educated and specifically trained to administer all types of anesthesia under the supervision of an anesthesiologist.

Based on my experience as a health care provider in our state, I believe licensure for anesthesiologist assistants would help patients, health care facilities, and the healthcare system as a whole. I urge the Department to support their licensure. Thank you for your time and consideration of this issue.

Comment Submitted By: Jeremy C. Wyatt, MBA, BS-HIM, Cer. A.T.T., Manager Perioperative Services

I fully support the addition of the Anesthesia Assistants. I would also like to propose the addition of an Anesthesia Technician / Technologist license. I would welcome to opportunity to present the “Why” behind this request. During this presentation I would highlight the history of the Anesthesia Technology world including our foundation in education.

[www.asatt.org](https://gcc02.safelinks.protection.outlook.com/?url=http%3A%2F%2Fwww.asatt.org%2F&data=04%7C01%7CAnesthesiology-sunrise%40doh.wa.gov%7Cd995a77e865c40ffcc7708d931c28215%7C11d0e217264e400a8ba057dcc127d72d%7C0%7C0%7C637595534632046432%7CUnknown%7CTWFpbGZsb3d8eyJWljoImC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6I1haWwiLCJXVCi6Mn0%3D%7C1000&sdata=kMBHXrbFC9goeskJwpGPnjaUSHlyhzlUxhv8L4Rf50%3D&reserved=0)<<https://gcc02.safelinks.protection.outlook.com/?url=http%3A%2F%2Fwww.asatt.org%2F&data=04%7C01%7CAnesthesiology-sunrise%40doh.wa.gov%7Cd995a77e865c40ffcc7708d931c28215%7C11d0e217264e400a8ba057dcc127d72d%7C0%7C0%7C637595534632046432%7CUnknown%7CTWFpbGZsb3d8eyJWljoImC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6I1haWwiLCJXVCi6Mn0%3D%7C1000&sdata=kMBHXrbFC9goeskJwpGPnjaUSHlyhzlUxhv8L4Rf50%3D&reserved=0>>

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<https://caahep.org/Program-Directors/Standards.aspx><<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fcaahep.org%2FProgram-Directors%2FStandards.aspx&data=04%7C01%7CAnesthesiology-sunrise%40doh.wa.gov%7Cd995a77e865c40ffcc7708d931c28215%7C11d0e217264e400a8ba057dcc127d72d%7C0%7C0%7C637595534632056392%7CUnknown%7CTWFpbGZsb3d8eyJWljoImC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6I1haWwiLCJXVCi6Mn0%3D%7C1000&sdata=4gzrk17r439E1uEWj4Qh%2F6FCPR3145EKP2TIZJUAGCY%3D&reserved=0>>

Thank you in advance for your time and consideration.

Comment Submitted By: Jennifer Becker

Hello. Would this be something that an anesthesia tech would/could get? Or is it a separate profession with more scope of practice? --

Comment Submitted By: Galina Barko

I am an Anesthesia Tech at Spokane Valley Hospital. I feel that it is a great idea for Anesthesiologist Assistants to have a professional license. This job requires a different education than is required of a CNA or a Medical Assistant, which are both professions that require a professional license. CNA and

Med. Assist. licenses require no knowledge about the Anesthesia Tech field. Requiring a license to be an Anesthesia Tech would also require that techs in this field have more education. Another benefit would be that a state license would standardize knowledge required of all Anesthesia Techs, no matter what city they work in or what hospital they are employed by. Also, if Anesthesia Techs pass the requirements for a state license, they would need less training when they start work at a hospital and therefore would be more prepared when they start work.

I am very interested in having this program available in Spokane, or available online. Currently the only programs available to Anesthesia Techs are in Seattle. This makes it impossible for someone to attend when they live in different cities.

Thank you for considering my suggestions. I hope that a state license for Anesthesia Techs becomes a reality.

Comment Submitted By: Lisa Zerby WA-Burien, MN, RN, CNOR, CNAMB, NPD-BC, RN Unit Based Educator – Perioperative & Procedural Services, St. Anne Hospital

Informed consent is a process, which should ALWAYS occur between the provider performing the procedure and the patient, or designated surrogate.

Comment Submitted By: Roman Kudrya

I work as a Nurse Anesthetist. I am licensed to provide anesthesia without needing supervision from a physician. I work in a hospital that has a medical direction anesthesia care team, so I have a physician anesthesiologist that supervises my work. They supervise in a 1:4 model, meaning there are up to 4 rooms that they supervise. There are many time, many times, that I would call as I am supposed to so they can be present for important parts of the case and they are either too busy to show up or they say call someone else. I am glad that I am independently licensed and can do things to save a patients life without depending on a physician that is not available or tells me to call someone else while precious seconds are wasted. I can do what needs to be done because I am independently licensed in our state. I would never have a procedure done with a CAA, I personally would like people that are fully licensed to work on me and I think we need to keep it the way it is no. There is no need to have CAA in our state. The places that have shortage of Anesthesiologists need to hire CRNAs that can do the same job, but there are hospitals that run Anesthesiologists only groups and refuse to hire CRNAs. That's not a true shortage of anesthesia providers, that's just a shortage of Anesthesiologists that can be fixed if they just hired CRNAs.

Thank you for you time.

Comment Submitted By: Robert Frerichs MD, Diplomat, American Board of Anesthesiology

My opinion is

- 1) there is not a shortage of competent anesthesia providers
- 2) our medical specialty has already been fragmented (to the detriment of patient care) by allowing CRNAs, who have less training and education than their Physician counterparts

3) much of the impetus for these changes is financial in origin

4) this addition of a group of lesser trained individuals will result in less competent patient care than the citizens of our State deserve and expect.

Please defeat this proposed legislation.

Comment Submitted By: Valerie Walsh, RN, MS

I am adamantly opposed. There is no safe way to do this and the only rationale I can assume is economic. The functions of an anesthesiologist are critical and require a great deal more training and expertise than one can provide in a lower level health care worker. There are probably practicing anesthesiologists who believe this is a good idea; these folks will never "practice" on me!!

I am an advanced practice registered nurse with many years of surgical experience and unfortunately understand too well how badly things can go wrong with OR life support. It would be extremely unwise to delegate these responsibilities to a lesser practitioner. Just examine outcomes in states where this role has been developed. We do not want this in WA state.

Comment Submitted By: Amber Hettinger

Yes, please create an anesthesiologist assistant license! I think we could use more health care professionals in the field! --

Comment Submitted By: Liz and Curtis Bruce CRNA,, MSN

I strongly urge you to reject the sunrise review application regarding licensure for Anesthesia assistants. They do not improve access to care or lower healthcare costs in Washington state. They are not able to practice independently in rural areas so there is no benefit for access to care in rural areas either. Washington state has never needed AA's for access to care in this state. Current independent practitioners in this state are better able to care for patients requiring anesthesia services in Washington state. The current anesthesia providers have more education and are able to provide more services than AA's. Thanks for your attention in this matter.

Comment Submitted By: Greg Aycock, Student Anesthesiologist Assistant - Class of 2023, Nova Southeastern University

My name is Gregory Aycock, I am a pharmacist of 16 years, but I am going back to school to become an anesthesiologist assistant. I've become jaded by the way the profession of pharmacy has been corrupted and perverted by money-hungry corporations. Even though I've decided to leave pharmacy, I still want to practice healthcare. I've just decided that it's more important to me that I feel like I'm making a meaningful contribution of which I can be proud. I stumbled upon the anesthesiologist assistant career path, and it seemed like a perfect match for what I wanted to accomplish and my particular set of skills. Although the anesthesiologist assistant profession is presently limited to practicing in 16 states, D.C., and Guam, I believe that will quickly change in just a few short years as the remaining 34 states realize the potential gaps they can fill with our services, and they race to rewrite laws inclusive of our practice.

Specifically looking into Washington's current situation, there are approximately 1,130 anesthesiologists and 657 nurse anesthetists in active practice. According to a Washington State Society of Anesthesiologists survey, 57% of respondents said they were trying to hire an anesthesiologist, 70% of those hiring said they had positions open for 6 months or longer, and 75% said they supported the licensure of anesthesiologist assistants. A quick glance on Washington's gaswork.com webpage (a website that advertises open anesthesia positions) shows a full page of companies looking to fill anesthesiologist positions and three full pages of companies looking for nurse anesthetists. All of that makes sense after reading a few articles describing patients traveling from midwestern states to Washington as a way to significantly reduce the costs of their surgical procedures. If Washington is facing a shortage of qualified anesthesia providers now, then one can only expect that trend to become more pronounced as more people gain access to affordable health insurance, they live longer, and the number of interventions requiring anesthesia continues to grow. The longer a supply/demand imbalance like this exists the more likely it is that anesthesia costs rise, fewer patients receive access to care or both.

Fortunately, the anesthesiologist assistant profession is in the process of expanding to fill the gap, and operate as physician extenders. If you've never heard of it before though, then you're not alone. I, myself, only became aware of the anesthesiologist assistant profession two years ago, but as more people become aware of this profession, even stronger candidates will gravitate towards it. I graduated in 2005 with a Pharm D. from Campbell University in North Carolina, and I eagerly jumped at the opportunity to go back to school for two years to become an anesthesia provider. During my shadow experience, I spoke to multiple MD's that said if they could do it all over again, they too would choose to become anesthesiologist assistants. In our Fort Lauderdale class, we already have one person that withdrew from medical school after his first semester when he discovered the profession (scored a 525 MCAT), as well as multiple nurses, respiratory therapists, and a variety of other healthcare professionals that all felt the same way.

Besides choosing the most promising career in healthcare, we didn't make anything easy for ourselves. To become an anesthesiologist assistant requires a Master's of Science in Anesthesia from a school authorized by the Commission on Accreditation of Allied Health Education Programs (CAAHEP). Nova University's program is a grueling 27-month sprint in which we complete 117 hours of didactic coursework, and gain over 2000 hours of hands-on anesthesia experience to prepare us to safely manage infirmed patients and deliver exceptional anesthesia care. If for some reason you were ever concerned with how the quality of our education stacks up against our midlevel nurse anesthetist contemporaries, then let the results speak for themselves. As compared to nurse anesthetists, when both are working under an anesthesiologist in an ACT model, there was "no statistically significant difference in outcomes of mortality, length of stay, and spending" according to the report titled Anesthesia Care Team Composition and Surgical Outcomes from the journal, Anesthesiology.

In conclusion, we appreciate the Washington Department of Health conducting a sunrise review of the proposal to regulate licensed anesthesiologist assistants, and I personally look forward to celebrating with my colleagues the addition of Washington as the 17th state in which anesthesiologist assistants gain the ability to practice. In particular, it would be exciting to catch a Seahawks game, join the 12th man experience, and watch Russ cook while on rotation in Washington.

Comment Submitted By: Mark F. Flanery, MD

I am writing as an individual anesthesiologist, who is a past president of the Washington State Society of Anesthesiologists (WSSA), in support of a proposal to license anesthesiologist assistants (AAs) in Washington state. The education and training requirements outlined in the draft bill and application, as well as a shortage of anesthesia providers in our state, support this sunrise review.

AAs are currently practicing safely and effectively under the direction of physician anesthesiologists in 18 other states. Anesthesiologist assistants have advanced graduate degrees and are required to complete a comprehensive didactic and clinical program at the graduate school level. They are trained extensively in the delivery and maintenance of quality anesthesia care as well as advanced patient monitoring techniques. Under the guidance of a physician, anesthesiologist assistants administer drugs, obtain vascular access, apply and interpret monitors, establish and maintain a patient's airway, and assist with preoperative assessment.

The demonstrated need for appropriately educated and qualified anesthesia providers, working under the supervision of a physician anesthesiologist, merits support. The WSSA recently conducted a survey that said almost 60% of practices in our state currently have positions open for anesthesiology providers. Of those practices, 70% of them have had the positions open for six months or longer.

Thank you for the opportunity to share our support for the licensure for anesthesiologist assistants. I appreciate your consideration.

Comment Submitted By: Nathan Rohenkohl

Subject: Regarding AA Legislation in WA

Comment:

Dear Sunrise Review Panel Member:

As a concerned member of the community, I urge you to reject the sunrise review application regarding licensure for anesthesiologist assistants (AAs). AAs do not improve access to care in Washington; in fact, there is reason to believe they will result in restricting access and driving up costs. AAs are narrowly trained and cannot practice without a licensed anesthesiologist.

Health care costs are on the continual rise not only in our state but in the nation. As an individual that is responsible for obtaining health insurance to cover these everrising costs, I have serious concerns about adding another provider to the anesthesia care team that will add another layer of cost to the patient when there is a safer, cost effective way to provide the anesthetic.

Certified Registered Nurse Anesthetists (CRNAs) are certified anesthesia experts independently licensed to practice in all 50 states and the District of Columbia. Because of their extensive education and training, CRNAs provide every type of anesthesia service to patients without the involvement or presence of a physician anesthesiologist. All research studies on anesthesia safety and cost-effectiveness conducted in the last 20 years confirm that CRNAs provide the safest, most costeffective anesthesia care to patients.

In contrast, AAs can only practice in 15 states plus the District of Columbia. They are limited by their training and licensure to providing clinical support to anesthesiologists and may not practice “apart from the supervision of an anesthesiologist,” according to the American Academy of Anesthesiologist Assistants (AAAA). Because AAs are required to be directly supervised by an anesthesiologist, the AA/anesthesiologist team is one of the costliest anesthesia delivery models with no scientific evidence of increased patient safety.

Most of our state is rural and my rural community, our hospital would not be open or functioning without the CRNAs that have remained here to provide the anesthesia services as well as a multitude of other services within our medical community.

Because AAs cannot practice without anesthesiologist supervision, AAs do not practice in rural areas where CRNAs working without anesthesiologist involvement are the primary providers of anesthesia care. AAs, therefore, can’t help solve problems of inadequate access to anesthesia care in rural and underserved communities.

Because CRNAs do not need to practice with an anesthesiologist, they are much more cost effective than AAs. With an AA, the need exists to educate and use two providers – the supervising anesthesiologist and the AA – to provide anesthesia care to one patient. With a CRNA, only that individual is needed to provide total anesthesia care to the patient. Essentially, compared with the anesthesiologist-AA staffing arrangement, one CRNA can provide the care of two providers.

I once again emphasize that, as a paying consumer in the healthcare arena, I have severe concerns about expanding the medical costs that I will have to absorb as a patient by adding a secondary anesthesia provider to an anesthesia care team when a more viable option is available. Not to mention the inability to cover the needs of a rural community hospitals without an acquiring an anesthesiologist which rural hospitals can not afford.

It makes no sense to authorize AAs, a less qualified anesthesia provider that can only work with anesthesiologists and can't be used in any area where anesthesiologists don't practice, such as many rural locations. Please reject the application for licensure of anesthesiologist assistants.

Sincerely,

Nathan Rohenkohl

July 16, 2021

RE: Anesthesiology Assistant-Sunrise Review

To Whom it May Concern:

I am writing a letter in strong support for the proposal to create a state license for anesthesiologist assistants (AAs) in Washington State. As a practicing anesthesiologist in our state for 35 years, I appreciate the important need for “Physician assistant (PA)-like” providers, specially trained to provide safe anesthesia care under the direct supervision of a physician anesthesiologist. These mid-level health care providers are trained at medical schools in multiple states in a 3-year Master’s degree curriculum in anesthesia. Their postgraduate anesthesia training is similar to the anesthesia training of certified registered nurse anesthetists (CRNAs). However, their pre-anesthesia training differs in that CRNAs are RNs with prior clinical experience as intensive care nurses, as opposed to AAs that have a premedical type of undergraduate curriculum. Most importantly, CRNAs can practice anesthesia independently in WA State, whereas AAs are required to work under the direct supervision of a physician anesthesiologist. The specialized anesthesia training of AAs also differs from PAs have on-the-job training and the supervision is direct and in-person, rather than the more remote supervision allowed for PAs. The specialized training and direct physician supervision of AAs is important for patient safety due to the high risk of anesthesia care, moment-to-moment decision making, and potential for patient brain damage or death due to provider error. An advantage of AAs is that they earn significantly less than CRNAs, and represent a highly effective cost-savings compared to physician-only or CRNA-only or physician-CRNA team based anesthesia care. Many anesthesiology groups in WA State provide anesthesia care using solo-physician anesthesiologists, even for routine surgeries and patients. These practices currently do not employ CRNAs due to their high salaries with limited work hours as it is more cost-effective to hire a physician. The licensure of AAs could reduce health care costs by reducing the number of physician anesthesiologists in the state. Licensure of AA will also improve access to care in underserved settings where there are few physician anesthesiologists, which limit the access to anesthesia care.

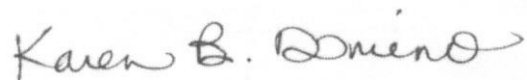
As an academic anesthesiologist with expertise in patient safety and as Chair of the American Society of Anesthesiologists Committee on Standards and Practice Parameters, which develops our specialty practice guidelines, I highly recommend that WA State create a license for AAs. I also have a strong working knowledge of health care financing after spending a year sabbatical in Washington DC as a fellow working on the House Ways & Means Health Subcommittee. I believe AAs can reduce health care costs and improve access to anesthesia care. My colleagues from the 15 states that license AAs all describe the advantages they observed with patient

Karen B. Domino, MD, MPH | Department of Anesthesiology & Pain Medicine

safety, cost-effective care, and improved access to care with the licensure of AAs in their state. At the University of Washington hospitals, AAs would complement care by CRNAs and physician anesthesiologists in a team based model of care, and thereby reduce the costs and improve access to anesthesia services, while maintaining quality and safety.

In conclusion, from my state and national knowledge in patient safety and health care policy, I highly recommend creating a license for anesthesiologist assistants in WA State. This new specialty would increase access and reduce cost of anesthesia care similar to improved access and reduced costs of health care by PAs. Anesthesiologist assistants, with their specialized anesthesia training and national certification, would provide the degree of safety needed for anesthesia care.

Sincerely,

A handwritten signature in cursive script that reads "Karen B. Domino".

Karen B. Domino, MD, MPH
Professor and Vice Chair for Clinical Research
Department of Anesthesiology & Pain Medicine
Adjunct Professor of Neurological Surgery
University of Washington School of Medicine
Box 356540
Seattle, WA 98195
kdomino@uw.edu
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July 17, 2021

Sherry Thomas
Anesthesiologist Assistant Sunrise Review Lead
Health Systems Quality Assurance
Washington State Department of Health
Sent via email to: anesthesiology-sunrise@doh.wa.gov

Dear Ms. Thomas,

My name is Patrick Hession I am a certified anesthesiologist assistant and I grew up in Spokane, Washington. I graduated from Gonzaga Prep High School. I currently work as an Anesthesiologist Assistant (AA) at Swedish Medical Center in Denver, CO as Washington doesn't recognize my license or skill set currently.

I am here to testify in strong support of the sunrise application for the licensure of anesthesiologist assistants in Washington, which would authorize the support for legislation to license and regulate anesthesiologist assistants also known as AA's. Enactment of this measure would provide the residents of Washington access to the benefits AAs currently provide—benefits that patients in 18 jurisdictions already receive from AAs today. I, along with my other AA colleagues, provide high quality and affordable anesthesia care to our patients.

I graduated from Gonzaga Prep High School. I got my undergraduate degree from Creighton University and I completed my Masters of Medicinal Science in Anesthesia, to become an anesthesiologist assistant, at the University of Colorado, graduating from the school of medicine. Upon completion of my training, I wanted to return back to Washington but due to the state not recognizing my profession, I haven't been able to and settled in Denver, CO. I have been practicing for 5 years.

I, as an AA, am a highly trained anesthesia provider with a master's degree who ensures I provide high quality anesthetic care to my patients regardless of their background or ability to pay. I work alongside my physician anesthesiologist colleagues under medical direction to implement anesthesia care plans. I work exclusively within the anesthesia care team (ACT) environment, meaning patients will always have two brains, two sets of hands and two sets of eyes involved in their care.

All AAs possess a premedical undergraduate background and complete a comprehensive didactic and clinical program at the graduate school master's degree level. The typical AA master's program is 24 to 28 months. We are trained extensively in the delivery and maintenance of quality anesthesia care as well as advanced patient monitoring techniques. We understand all the disease states, pharmacology and all other factors that can influence anesthetics and ensure we provide high quality care to our patients. In multiple states, we were utilized during the Covid Pandemic to assist with the management, breathing device placement and invasive line placement of critically ill patients.

My profession is an established profession that has been serving patients for over five decades, we have been around since 1968. AAs are recognized by the Centers of Medicare and Medicaid (CMS), Tri-care, and all major commercial insurance payors. CMS recognizes AAs as qualified non-physician anesthesia providers, just like our nurse anesthetists (CRNA) counterparts. AAs are as safe and effective as nurse anesthetists.

There is no peer-reviewed or other credible evidence of any sort that the care provided by an anesthesiologist assistant is less safe than that of a nurse anesthetist. In October of 2018, there was a study published in the reputable Journal, Anesthesiology, that concluded "The specific composition of the anesthesia care team was not associated with any significant differences in mortality, length of stay, or inpatient spending."

As a practicing CAA for 5 years and a Washington Native, I strongly encourage your support of the Anesthesiologist Assistant Sunrise Application for legislation of AA's so Washington patients can benefit from the highly trained care AAs provide. I would love to be able to return home and take care of patients in Washington.

Thank you for your consideration.

Patrick Hession,CAA, MMHSc
402-290-2598
Patrick.hession@usap.com

June 27, 2021

Sherry Thomas
Anesthesiologist Assistant Sunrise Review Lead
Health Systems Quality Assurance
Washington State Department of Health
Sent via email to: anesthesiology-sunrise@doh.wa.gov

Dear Ms. Thomas,

My name is Eric Barbret. I am an Anesthesiologist Assistant student. I grew up in Naperville, IL and I received my Bachelor of Science in Biology from San Diego State University. I am currently working on my Masters of Medical Science in Anesthesia at the Medical College of Wisconsin and am set to graduate in December of 2021.

I am writing to testify in strong support of the sunrise application for the licensure of anesthesiologist assistants in Washington, which would authorize the support for legislation to license and regulate anesthesiologist assistants also known as AA's. Enactment of this measure would provide the residents of Washington access to the benefits AAs currently provide—benefits that patients in 18 jurisdictions already receive from AAs today. I, along with my other AA colleagues, provide high quality and affordable anesthesia care to our patients.

My partner grew up in Bremerton and has lived in the greater Seattle area most of her life. Her family still resides in Seabeck, including her elderly grandmother. We would be thrilled to be able to live closer to her, as her cognition has recently been declining. My partner misses her family and her home. I am set to start a job at Gundersen Lutheran Medical Center in La Crosse, WI as Washington doesn't recognize my license or skill set currently.

I, as an AA, am a highly trained anesthesia provider with a master's degree. I provide high quality anesthetic care to my patients regardless of their background or ability to pay. I work alongside my physician anesthesiologist colleagues, under medical direction, to implement anesthesia care plans. I work exclusively within the anesthesia care team (ACT) environment, meaning patients will always have two brains, two sets of hands and two sets of eyes involved in their care.

All AAs possess a premedical undergraduate background and complete a comprehensive didactic and clinical program at the graduate school master's degree level. The typical AA master's program is 24 to 28 months. We are trained extensively in the delivery and maintenance of quality anesthesia care as well as advanced patient monitoring techniques. We understand all the disease states, pharmacology and all other factors that can influence anesthetics and ensure we provide high quality care to our patients. In multiple states, we were utilized during the Covid Pandemic to assist with the management, breathing device placement and invasive line placement of critically ill patients.

My profession is an established profession that has been serving patients for over five decades, we have been around since 1968. AAs are recognized by the Centers of Medicare and Medicaid (CMS), Tri-care, and all major commercial insurance payors. CMS recognizes AAs as qualified non-physician anesthesia providers, just like our nurse anesthetists (CRNA) counterparts. AAs are as safe and effective as nurse anesthetists.

There is no peer-reviewed or other credible evidence of any sort that the care provided by an anesthesiologist assistant is less safe than that of a nurse anesthetist. In October of 2018, there was a study published in the reputable Journal, Anesthesiology, that concluded "The specific composition of the anesthesia care team was not associated with any significant differences in mortality, length of stay, or inpatient spending."

As an anesthesiologist assistant student and midwesterner who greatly misses the Cascades and the Pacific, I strongly encourage your support of the Anesthesiologist Assistant Sunrise Application for legislation of AA's so Washington patients can benefit from the highly trained care AAs provide. I would love for my partner and I to return to her home and be able to take care of patients in Washington.

Thank you for your consideration.











Eric Barbret, AA Student
630-877-1455
ebarbret1@gmail.com

As a fellow Washingtonian and a practicing Certified Registered Nurse Anesthetist, I wanted to reach out to your committee to provide some important information that was overlooked or misrepresented by the Physician Anesthesiologists who submitted this bill. Please view the attached documents that further explain and outline the limitations, concerns, and increased costs associated with AA use.


WHAT (STATE) LAWMAKERS NEED TO KNOW ABOUT

CRNAs vs. AAs


There is no shortage of Certified Registered Nurse Anesthetists (CRNAs) or physician anesthesiologists to provide safe, high-quality anesthesia care to patients in (State). Currently, anesthesiologist assistants (AAs) are not a recognized healthcare provider in (State) for **many reasons**.

| CRNAs | AAs |
|---|---|
| Independent, safe, cost-effective—ensure access to care | Dependent, unproven, costly—do not improve access to care |
|  CRNAs...and anesthesiologists can work independent of one another OR together by law to ensure patients access to surgical, obstetrical, emergency and pain management services in rural and urban locations across the state. |  AAs...cannot work independently; they can only work under the direct supervision¹ of an anesthesiologist , dramatically limiting where and when they can provide patient care. |
|  CRNAs...are educated and trained to work independently (without an anesthesiologist). |  AAs...are educated and trained to assist anesthesiologists. |
|  CRNAs...may work in an anesthesia care team (with an anesthesia care team), but are not required to do so. |  AAs...must work in an anesthesia care team with an anesthesiologist. |
|  CRNAs...working in a care team will continue to provide patient care if there is a lapse in supervision² . |  AAs...legally cannot provide patient care if there is a lapse in supervision . |
|  CRNAs...provide quality care despite lapses in supervision. In such cases, the facility simply bills exclusive of the anesthesiologist for the procedure (QZ vs. medical direction). |  AAs...cannot provide care without direct supervision , leading to possible case delays or even unauthorized independent practice, regulatory violations, and accreditation jeopardy for facilities . |

Other CRNA Advantages



Since 2000, multiple research studies confirm that CRNAs are **safe, high-quality** anesthesia providers—**as safe as physician anesthesiologists**.



The **most cost-effective anesthesia delivery model** is a CRNA working independently; the most expensive is one anesthesiologist supervising another provider.

CRNAs: Ensuring patients access to safe, cost-effective anesthesia care

Logo Here

(STATE) Association of Nurse Anesthetists

STATEwebsite.org

1 As used in this document, "supervision" also refers to "medical direction" under TEFRA (Tax Equity and Fiscal Responsibility Act of 1982).
 2 "Lapse in supervision" is the inability of a supervising anesthesiologist in an anesthesia care team to be physically present at "bedside" during required (most important) aspects of a case as specified under TEFRA.

AAs Anesthesiologist ASSISTANTS

INFLEXIBLE STAFFING STRUCTURE POTENTIAL **REDUCED REVENUE**

AAs are **only** able to provide anesthesia care **under the direct supervision** of a physician anesthesiologist.

Physician anesthesiologists can only bill for AAs when medical direction criteria are met.



AAs CANNOT work Autonomously



AAs CANNOT Collaborate with Surgeons or Proceduralists



Medical Direction (QK) TEFRA¹ Compliance Capability

(2:1 Ratio)



AA + ANES²

12 + 6

Staffing Cost³

4.52M

Failed Medical Direction (QK) defer to Supervision (AD) Billing

(3:1 Ratio)

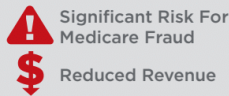


AA + ANES²

12 + 4

Staffing Cost³

3.68M



- **AAs must work** in an Anesthesia Care Team Model generally billed under Medical Direction billing model with no more than a 4:1 ratio (57 FR 33878, July 1992); However, the more costly, inefficient 2:1 ratio is more commonly used.
- AAs are trained to **ASSIST** physician anesthesiologists and **lack the staffing flexibility** needed in today's dynamic healthcare delivery systems. First starts in the morning and complications may result in delays or **even fraudulent practice or billing with potential jeopardy for facilities.** One study found physician anesthesiologists did not meet TEFRA rules 35% for 2:1 and 99% for 3:1 ratios.⁴
- CMS has **denied AAs** billing for services as performed autonomously. A physician anesthesiologist who fails to meet medical direction TEFRA¹ rules **must bill using the AD modifier and lose revenue** of up to 50%.

¹ Tax Equity and Fiscal Responsibility Act of 1982

² Physician anesthesiologist

³ Staffing costs are based on salary only and provider staffing cost ratios are comparable when using median CRNA salary (\$166,540) according to 2018 AANA Compensation & Benefits Survey. Salary costs for physician anesthesiologists are based on the 75th pctl salary (\$420,284) according to HR Reported data as of March 29, 2018 form Salary.com

⁴ Epstein R, Dexter F. (2012). Influence of supervision ratios by anesthesiologist on first case starts and critical portions of anesthetics. *Anesthesiology*, 116(3):683-691.



WVANA.com



AANA.com

Five reasons that anesthesiologist assistants limit anesthesia flexibility and profitability

Written by Mike MacKinnon MSN FNP-C CRNA | November 30, 2017 | [Print](#) | [Email](#)

There are four groups of anesthesia providers in the United States. Physician Anesthesiologists, Dental Anesthesiologist, Nurse Anesthesiologists and Anesthesiologist Assistants (AA). Dentist, Physician and Nurse Anesthesiologist work in every state of the union autonomously and have since each professions inception.

However, the newcomer AAs, require direct supervision by a Physician Anesthesiologist to practice anesthesia and are currently only licensed in 15 states; they are also not approved for practice in the US Military. Our rapidly evolving healthcare system is best served when all practitioners can provide the full scope of anesthesia services independently/autonomously, thus maintaining practice flexibility and ensuring fiscally responsibility and patient access to care. The following are 5 key reasons why AAs cannot help hospitals, other healthcare facilities and anesthesia departments meet these goals:

1) Inefficient Model: AAs must work directly under a Physician Anesthesiologist in a 1:4 or less ratio depending on state law and billing model without losing significant revenue³. The AA medical direction requirement could lead to delayed starts, fewer cases done per day and higher costs to the system due to CMS TEFRA rules³. It also eliminates AAs as part of the solution to improving access to care in medically underserved areas (such as rural America), and could cost a practice significant revenue due to AAs inability to expand access to care as needed.

2) High Risk for Medicare Fraud: AA practice must be billed as medical direction for maximum revenue generation and in order to avoid high risk for Medicare fraud. The civil fines are up to three times the amount of damages sustained by the government and an additional charge of up to \$21,563 per false claim^{1,2}. Criminal penalties may include fines, imprisonment or both. In the 2012 article entitled “Influence of supervision ratios by anesthesiologists on first-case starts and critical portions of anesthetics” in the journal *Anesthesiology* found that 35% of the time in a 1:2 ratio the required medical direction (TEFRA) rules were not be followed resulting in Medicare fraud which could easily be the case for medically directed AAs¹. Facilities may also be at risk for Medicare fraud for not assuring appropriate medical direction of AAs, practices cannot afford this but neither can the facilities they serve.

3) Unsustainable Costs: The medical direction practice model is the most expensive and least efficient due to the requirement of one physician anesthesiologist for every four AAs/Nurse Anesthesiologists. While Nurse Anesthesiologists can work autonomously, thereby expanding services in greater ratios or on their own, AAs generally only work in a maximum 4:1 model. This additional cost of service requires large subsidies from the facility to maintain high cost anesthesia services. Such subsidies are a significant line item expense not sustainable by facilities already under significant downward economic pressure in an uncertain healthcare environment. These additional costs coupled with the high probability of Medicare fraud puts anesthesia practices and facilities at risk.

4) AAs fail to meet demand: The operating room is a dynamic environment with constantly shifting needs. It is not uncommon to have emergency cases and add-ons requiring opening additional ORs and therefore anesthesia providers. While Physician Anesthesiologist and Nurse Anesthesiologists can work autonomously to meet these needs AAs cannot as they are limited by the number of Physician Anesthesiologist available to cover them. This can result in delayed cases, decreased efficiency and lack of flexibility to meet operating room demand and/or increased costs for additional Physician Anesthesiologist to medically direct and non-revenue generating extra bodies waiting for cases. All of which are bad for facility and practice bottom lines.

5) Not Full Service: New graduate AAs have only 2000-3000 hours of experience compared to ~9000 for CRNAs and require no previous clinical experience prior to AA school^{4,5}. This leaves a large gap in clinical capability, skill, experience and clinical acumen entering their programs. By comparison, Nurse Anesthesiologists earn a bachelor's degree in nursing and attain an average of 2.5 years of critical care experience before entering a nurse anesthesia educational program. Thus, AAs require significant guidance and close direction during the administration of anesthesia and cannot work autonomously.

Today, anesthesia practices and facilities must be more cost conscious than ever. With increasing anesthesia needs, stagnant revenue and facilities seeking to reduce or eliminate anesthesia subsidies from the bottom line, all practices will be required to do more with less. To meet this demand in a cost-effective way it is imperative that practices use practitioners who can provide the full scope of anesthesia services independently/autonomously, limit fraud risk, be highly flexible and increase access. The use of AAs simply does not achieve these goals.

1. Epstein, R. H., & Dexter, F. (2012). Influence of supervision ratios by anesthesiologists on first-case starts and critical portions of anesthetics. *Anesthesiology: The Journal of the American Society of Anesthesiologists*, 116(3), 683-691.

2. Department of Justice. (2016). The False Claims Act: A Primer. Retrieved from https://www.justice.gov/sites/default/files/civil/legacy/2011/04/22/C-FRAUDS_FCA_Primer.pdf

3. Centers for Medicare Services. (2017). Chapter 12 - Physicians/Nonphysician Practitioners. Retrieved from <https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/downloads/clm104c12.pdf>

4. Nova Southeastern University. (2018). Master of Science in Anesthesia (AA). Retrieved from <http://healthsciences.nova.edu/healthsciences/anesthesia/forms/brochure.pdf>

5. American Association of Nurse Anesthetists. (2017). AANA Position on Anesthesiologist Assistants. Retrieved from [https://www.aana.com/docs/default-source/sga-my-aana-web-documents-\(members-only\)/aana-position-on-aas.pdf?sfvrsn=81be41b1_0](https://www.aana.com/docs/default-source/sga-my-aana-web-documents-(members-only)/aana-position-on-aas.pdf?sfvrsn=81be41b1_0)

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Thank you for your time and consideration,

Matthew Simonetti, CRNA

Comment Submitted By: Timothy Butterworth

My name is Timothy Butterworth and I am a CRNA practicing in the State of Washington. I am also a member of member of the Washington Association of Nurse Anesthetists (WANA).

I suspect most letters opposing the sunrise review application regarding licensure for anesthesiologist assistants (AAs) will focus on the facts AAs are narrowly trained and cannot practice without a licensed anesthesiologist. These letters will also reference that AAs are an unproven provider with no peer-reviewed studies that prove the safety of AAs. I'd like to acknowledge a different perspective, that accepting the application for licensure for anesthesiologist assistants would reinforce a system filled with fraud and remove logical checks and balances.

I am currently employed at Harborview Medical Center. Harborview Medical Center is a medically directed anesthesia model. Additionally, I have previous experience with other models of anesthesia including medical supervision and independent CRNA practice.

In its most basic form, the medically directed anesthesia model relates to reimbursement with by Medicare. A series of rules are provided for the purpose of Medicare billing. These rules are referred to as TEFRA requirements. The model also limits the ratio of anesthesiologists to CRNAs and anesthesiology residents. Failure to comply with any of the rules is considered fraudulent billing by Medicare. The rules require an anesthesiologist to:

1. Perform the pre-anesthetic examination and evaluation of the patient.
2. Prescribe the anesthetic plan.
3. Personally participate in induction, emergence and other aspects of the anesthesia plan.
4. Any procedures not performed by the physician must be done by a qualified anesthesia provider.
5. Monitor the anesthesia administration at regular intervals.
6. Remain physically present and available for immediate diagnosis and treatment of emergencies.
7. Provide indicated post-operative anesthesia care.
8. Documentation in the anesthesia record of the above.

In my experience these requirements are inconsistently met. A recent American Society of Anesthesiologist publication agreed. The research showed even at the minimum 1:2 ratio (1 MD to 2 CRNAs/Residents) these metrics were missed 35% of the time. At higher ratios lapses occurred 99% of the time.

Anesthesiology Assistants are required to practice in a medically directed model. They are limited by their training and licensure to providing clinical support to anesthesiologists alone. By design, this removes a check and further perpetuates a fraud in our healthcare system.

Please reject the application for licensure of anesthesiologist assistants.

Sincerely,

Timothy Butterworth

Comment Submitted By: Brett G. Bence, OD, FAAO

I am a part owner of two Ambulatory Surgical Centers of four that provide ophthalmic care in serving patients in western Washington in both rural and urban communities. Since the inception of our surgical centers, we have only contracted or employed CRNAs to provide anesthesia. Without question from my experience, they have served us and our patients extremely well.

After reading the proposal to develop an Anesthesia Care team that requires an anesthesia assistant(s) to be supervised by an anesthesiologist, it appears unlikely that this can be more efficient, cost effective, have immediate MD or DO availability in an OR crisis, and better care than what we have now: independent and highly functioning CRNAs and anesthesiologists. Further, CRNAs are clearly the de facto anesthesia provider in over 70% of Washington rural counties where unsupervised anesthesia assistants would have no role.

With regard to the troubling article from 2012 by Epstein, [et.al.](#) (*Influence of supervision ratios by anesthesiologists on first-case starts and critical portions of anesthetics*), as the ratio increased between a single anesthesiologist and multiple AAs, the evidence showed that during critical maneuvers and anesthesia care plans, there was less availability of the supervisor. Staggering OR times have been reviewed and other remediating options may be considered, but this takes time. This deserves further review by the WA DOH before legislative action.

Finally, the sunrise review committee needs clarification and a clear definition of several items. One such item is the statement that the supervisory anesthesiologist be “on-site”. As a patient advocate and provider, I would expect that anesthesiologists would be required within very close proximity of adjacent ORs when they are supervising, versus what could be a significant delay if “on site” could be interpreted as elsewhere in the hospital or adjacent clinics.

In summary, there are instances where change can be warranted and beneficial. With the above concerns, in my opinion we need more review of this issue and DOH input before any legislative consideration. In the meantime, we have a highly effective and compassionate profession of certified registered nurse anesthetists and excellent anesthesiologists that continue to provide care to the communities in our state.

Comment Submitted By: Sulayman Jobarteh, CRNA

My name is Sulayman Jobarteh and I am a CRNA practicing in the State of Washington. I have lived in this state since the summer of 2000 and did all my nursing education in this state. I started working as a Registered Nurse (RN) at Harborview Medical Center (HMC) in 2008. I was an acute care RN in a busy step down telemetry floor for 3 years. In 2011, I applied to and was accepted into the Intensive Care Unit (ICU) citywide consortium. This ICU training lasted 6 months. At the successful conclusion of the training, I continued to work as an ICU RN for 5 years.

As an ICU RN, I routinely take care of critically sick cardiac and medical patients from all kinds of backgrounds. Most of these patients are intubated and on life saving treatments and drug therapy requiring titrations. Critical thinking and prioritizing interventions are a required and critical element of an ICU RN role. This experience prepared me for my current career.

In 2016, I applied to the Nurse Anesthesia Program (NAP) at Oregon Health and Science University (OHSU) in Portland, Oregon. This was a rigorous integrated 27-month training in the delivery of all kinds of anesthesia to all patients across the lifespan. This training took me to all kinds of clinical settings in the states of Oregon, Washington and Idaho. My training completely and exhaustively prepared me to provide anesthesia safely and independently in any type of setting. I have worked at HMC since February of 2019. In this role, I routinely provide anesthesia for all kinds of cases including major burn and trauma cases, complex spine and orthopedic cases, etc., in a medically directed set up. The Anesthesiologists I work with trust my judgement and capability to take care of critically injured or burnt patients requiring anesthesia for surgery. Beyond their presence at induction of anesthesia and occasional check-ins, I manage these patients for long stretches at a time, independently. My former role as an ICU RN helped prepare me well for these type of patients.

The reason I pointed all of this out is to show the unique difference and superiority of our total patient care experience and training over Anesthesiology Assistants (AA). Looking at the profile of a typical AA, one would quickly discover that a majority of them do not have any patient care experience. Certified Registered Nurse Anesthetists (CRNAs) have a wealth of patient care experience even before their anesthesia training. A requirement to enter any NAP is a minimum of 1 year critical care experience. The average CRNA has 2-3 years of this experience. AAs on the other hand, are not trained to be independent and must rely on the presence of an anesthesiologist to provide anesthesia. Experience is accumulated over several years and cannot be taught. One cannot help but conclude that CRNAs are better prepared and positioned to help alleviate the anesthesia provider shortage that is being alleged in the application to license AAs in Washington.

Currently, NAP programs offer a terminal doctorate degree (either a DNAP or DNP). This will prepare future CRNAs to continue to take leadership roles in the field of anesthesia and continue to advance practice through research and education. AA programs currently do not have this requirement. Since MDAs frequently link more education to better preparedness, then one can say CRNAs are better and more quality providers than AAs.

Many healthcare facilities in our state can make an immediate impact on staffing by changing the model of care. One can still have anesthesiologist control of anesthesia delivery (which ultimately is the goal of this application) by adopting the supervisory model of anesthesia care team model (ACT). This way, both CRNAs and MDAs will be doing their own cases versus the medically directed model, where CRNAs are doing cases and MDAs for the most part not. With the former scenario, more operating rooms can open and more cases can be done. With AAs, only a medically directed set up is possible. This therefore means that Licensing AAs will not materially change the status being alleged by The Washington State Association of Anesthesiologists and their national organization, the ASA. In this case, Licensing another health profession that does not change the status quo. CRNAs work independently at Critical Access Hospitals (CAHs) around the state of WA and around the USA. CRNAs are sole providers of anesthesia in the US Military, including in war zones. These facts are documented and incontrovertible.

A careful perusal of this application will show that this application has little to do with what has been alleged in the sunrise review application. It has most to do with the nationwide punch, counterpunch between our two national organizations. AA agenda is being pushed as a balance to the growing recognition and recognition of the critical role CRNAs are playing and can play in making anesthesia services available to surgical patients.

I therefore urge the committee members to reject this application and deny licensing to AAs in this state. The solution to the problem is within, not in licensing a new profession.

I thank the committee members for their time and the opportunity given to stakeholders to submit a comment on this issue.

Comment Submitted By: E. Antonio Mangubat, MD

As a surgeon, I urge you to reject the sunrise review application regarding licensure for anesthesiologist assistants (AAs).

As the owner of a La Belle Vie Cosmetic Surgery Center, I work with CRNAs and anesthesiologists. Both practice as independent providers in my facility, and both provide safe and thorough care to my patients.

In the constantly evolving landscape of health care, two issues always at the forefront are access to care, and health care spending. Bringing AAs to the state of Washington will not increase access, and it will most certainly drive up state and federal health care costs, especially in the institutions that would theoretically utilize AAs.

First and foremost, from an economic standpoint, it is not prudent to pay two anesthesia providers to take care of one patient. Unlike 2 surgeons working together, 2 anesthesia providers do not get the case done faster to increase patient safety.

Certified Registered Nurse Anesthetists (CRNAs) as well as anesthesiologists are autonomous anesthesia providers, and both provider types are highly trained to deliver safe, effective care to their patients.

AAs, however, require “supervision” and thus cannot function without the costly Medical Direction and Anesthesia Care Team (ACT) models. If you review healthcare literature and costs, you would find that the ACT is the most expensive model of anesthesia care. These costs impact our patients and communities as they drive up the cost of care.

As a result of the aforementioned AA supervision requirement, AAs cannot work independently in rural hospitals, which serve large geographical regions that are desperate for access to care. CRNAs are the only anesthesia provider in 72% of Washington’s rural hospitals which leaves no function for the AA at those facilities. Rural hospitals are also often unable to match anesthesiologist salaries at larger, private hospitals, hence the preponderance of CRNAs in these rural positions.

I would also like to note that the 2020 Workforce Council’s report had a heavy focus on those working in rural areas. Again, the AA role has no purpose in these rural facilities due to its inherent restrictions.

It’s time to move from an expensive and inefficient Anesthesia Care Team model to a collaborative, supervisory or independent anesthesia practice model. There is an ongoing and increasing need for surgical patients to have access to safe, cost-effective anesthesia care. I suggest, instead of the costly burden of licensing a new, dependent anesthesia provider, that you ask the hospitals to change their outdated policies that restrict the practice of independent CRNAs.

Comment Submitted By: Blair Ryan CRNA, MSNA

I’ve been a nurse anesthetist four years now working in a care team model. I urge you to not allow AA’s to be used in our healthcare system. As a CRNA, I have been trained to deliver and provide all aspects of

anesthesia to patients in any setting. AA's are anesthesiologist answer to further place a stronghold against my profession. We don't need AA's and please listen to the rest of my cohorts for the many reasons why this is a further move to lower the standard of care these 'anesthesia puppets' enable.

Comment Submitted By: Andrea Silvola

Dear Sunrise Review Panel Member,

I am a Certified Registered Nurse Anesthetist currently practicing in MN. My comments are of a personal nature.

When I finished grad school 10 years ago my husband and I, yearning for adventure, were interested in relocating to Washington state. We had some friends living in Seattle.

I spend COUNTLESS hours networking and job searching. I filed out all the state licensure paperwork so that I was ready to go if I was to be awarded a position.

It never happened.

I was never offered a job anywhere in the state of Washington. I filed out many applications and was only granted a handful of interviews. Ten years ago most of the hospitals were anesthesiologist only. Slowly they have opened up more positions to CRNAs but it is my impression now that they want to hire AA's.

This is a political move.

I can assure you there is no shortage.

There are hundreds of CRNA's who would like jobs in Washington, if not thousands.

Many are CRNA's who are from Washington who would like to go home and many are people like me who are just willing and desiring to move there.

I was always denied a position because it was given to a local. There just weren't enough positions for CRNA's. I am currently practicing in Northern MN and WI.

AA's are able to practice in WI. They were granted licensure in WI approximately 10 years ago to help with the workforce shortage there. It hasn't helped. There is still a shortage in WI. I guess it is an undesirable location. They never came to help.

Maybe since Washington is a desirable location they will come to help. But I can tell you the expense and time spent on getting another provider licensed to practice and regulated will be in vain. It just simply is not necessary.

You have CRNAs that are more than willing to fill those jobs.

Again, the shortage is a false narrative used by anesthesiologists, as a political tool.

I'm sure you have read many letters explaining that so no need for me to go into it.

Thank you for your time and thank you for reading my letter.

I have nothing, really, to gain by writing this at this point.

I can promise you though that there are many CRNA's waiting for opportunities to work in Washington if only the opportunities were given to them.

Comment Submitted By: Peter Valaas

Subject: Anesthesia Assistants

Comment:

Would like to comment on proposal. My background is 32 years practicing anesthesia in Wenatchee. Many years as department chair. Many years as anesthesia group corporate president.

Briefly:

1. Anesthesia Assistants should be licensed to work in Washington State.
2. The proposed scope of practice is too broad and should be more limited.

Comment Submitted By: Tania Derington

We do not want AAs to practice in the state of Washington. They do not help with the burden of cases and they are not cost effective. I left my job in another state to come to Washington. One of the reasons I came here is because there are no AAs.

Comment Submitted By: Gregory Clopp

As a CRNA in WA, currently practicing to the full extent of my training and licensure, I fail to see how adding a third type of anesthesia provider to the mix will benefit patients, hospitals or communities at all.

It would be a much better use of resources to encourage all anesthesia groups to abandon the expensive and inefficient "Care Team" model where one person (usually loosely!) supervises two others in the administration of anesthesia - effectively requiring three people to do the job of two.

In fact, AAs are dependent on exactly that model as they must be directly supervised at all times. Three people performing the job of two does not increase access to care - three people doing the job of three provides care to 33% *more* patients.

More than one study has demonstrated that CRNAs practicing independently are just as safe as any other model of anesthesia care. Why not abandon the regulatory expense of licensing another provider and find ways to entice hospitals and anesthesia groups to embrace a more financially (and personnel-related) efficient approach?

Comment Submitted By: Kathryn Kolan

On behalf of the Washington State Medical Oncology Society (WSMOS), we are writing to express our organization's support for licensing anesthesiologist assistants (AA) in Washington state. WSMOS is the professional organization representing medical oncologists in the state. Our aims are to identify and work to improve oncology practice issues that adversely affect patient access to cancer care and to support and encourage clinical research against cancer.

The federal Centers for Medicare and Medicaid Services (CMS) recognize anesthesiologist assistants as non-physician anesthesia providers, as they do nurse anesthetists. As we understand it, the Washington Medical Commission recently proposed rules to regulate when physician assistants may administer anesthesia, which define adequate education and training for administering general and intrathecal anesthesia as "completion of an accredited anesthesiologist assistant program." AA's are recognized health profession practicing throughout the country, licensed in 17 states. To address Washington's profound workforce shortage, establishing an AA state licensure could help bring trained professionals into Washington.

It's important to WSMOS that the Washington State Anesthesia Society also supports and was the applicant for this proposal. We appreciate that an AA would work under the supervision of an anesthesiologist, would have an advanced graduate degree and complete a comprehensive didactic and clinical program at the graduate school level. AAs are also trained extensively in the delivery and maintenance of quality anesthesia care as well as advanced patient monitoring techniques.

Dr. Blair Irwin, WSMOS President

Comment Submitted By: Phil Bouterse

Certified anesthesiologist assistants (CAAs) are highly trained master's degree level non-physician anesthesia care providers. The CAA profession was established in the late 1960s by physician anesthesiologists. After studying the educational pathway for physician anesthesiologists and nurse anesthetists, physician anesthesiologists created a new educational paradigm for a mid-level anesthesia practitioner emphasizing a science/pre-medical – rather than nursing – background in college. This person would perform the same job as nurse anesthetists but could seek admittance to medical school if appropriate. The founders recognized early the advantage of a strong pre-medical background in comparison to the nursing education background of the nurse anesthetist profession.

The federal government, specifically the Medicare Program, and numerous states recognize certified anesthesiologist assistants and nurse anesthetists as being qualified anesthesia providers who have identical clinical capabilities and responsibilities while working in the Anesthesia Care Team model. For decades, the Anesthesia Care Team has safely and effectively delivered anesthesia care with either a certified anesthesiologist assistant or nurse anesthetist as the non-physician anesthetist member of the team.

It is the position of the American Society of Anesthesiologists, of which I am a member and fully endorse, that both certified anesthesiologist assistants and nurse anesthetists have identical patient care responsibilities and technical capabilities – a view in harmony with their equivalent treatment

under the Medicare Program. Certain differences do exist, however, between certified anesthesiologist assistants and nurse anesthetists with regard to educational program prerequisites, instruction, and requirements for supervised clinical practice. For example, nurse anesthetist programs require a nursing degree and one year of critical care experience, while certified anesthesiologist assistant programs require a bachelor's degree emphasizing pre-medical, science-based coursework. Additionally, certified anesthesiologist assistants must practice under the supervision of a physician anesthesiologist. In no way is this a mark of inferiority but rather a realistic recognition that non-physician anesthetists must work within the relationship of a physician anesthesiologist to best ensure patient safety and optimal delivery of care.

It is for the reasons stated above, that I, as a practicing anesthesiologist in the state of Washington enforce the immediate creation of licensure for certified anesthesiologist assistants.

Comment Submitted By: Deanna Latendresse

Please support legislation that allows AA's

Tom Latendresse, MD

Comment Submitted By: Frans Swart

I strongly support the licensing and utilization of Anesthesia Assistants in our State Of Washington.

Comment Submitted By: Lisa Richardson

I am extremely interested in the assistant for anesthesiologists and would welcome any info if this becomes an active position. Ive been an active CMA for over 20 years and this really intrigues me.

Comment Submitted By: Anthony Johnston

I am in full support of this

Comment Submitted By: Megan Espana

I think this is an awesome idea! I do hope the schooling for it wouldn't be years and years. It sounds more like a trade job, which should be kept to a year or two max. So many moms like me desire a higher paying job in Healthcare, but don't have the time or money to go back to school and work and raise a family. I am a CNA but would love to go on further ??

Good luck!

Comment Submitted By: Jennifer Cowgill

I write to you today because of an issue that has been brought to my attention about the critical need for CRNA's in the state of Washington. As an alumnus of Providence Sacred Heart Medical Center and Gonzaga University School of Anesthesia, I am acutely aware of the role CRNA's play in the variety of settings in the state of Washington. You may be aware that CRNA's provide most of the rural anesthesia care in the United States and are integral in promoting affordable access to care. CRNAs, according to research, have equal outcomes as their counterpart physician anesthesiologists and can practice independently. I look forward to assisting in alleviating this work shortage and would like to state how important the current CRNA practices and state of Washington are to me.

Comment Submitted By: Shane Angus, MSA, CAA, Chair

The Association of Anesthesiologist Assistant Education Programs (AAAEP)* is submitting this comment in strong support of licensure for Anesthesiologist Assistants (AA) in Washington State (Refer RCW 18.120.010).

AAAEP is the national association of AA profession education programs representing program directors, program medical directors, educators and administrators, and serves as "the Voice of Anesthesiologist Assistant Education".

The first AA program was started in 1969 and today there are 12 nationally accredited and 3 new Anesthesiologist Assistant Educational programs in the United States. Our member programs award a Master's degree upon program completion for new graduates. Applicants to our member programs must have completed a minimum of a Bachelor's degree and pre-medical coursework including Biology, Chemistry, Organic Chemistry, Physics, and Advanced Math. AA Programs must have a Certified Anesthesiologist Assistant (CAA) as the program director and a board certified physician Anesthesiologist as the program medical director. All AA programs must be affiliated with a nationally accredited School of Medicine.

Anesthesiologist Assistants have been an established profession for over five decades and AAs are recognized by the Centers of Medicare and Medicaid (CMS), Tri-care, and all major commercial insurance payors.

AAs are highly skilled, advanced practice health care professionals who work in the Anesthesia Care Team (ACT) with licensed physician Anesthesiologists to implement all aspects of anesthesia care plans. AA's provide high quality, safe, and affordable anesthetic care to patients in 19 jurisdictions. CMS recognizes AAs as qualified non-physician anesthesia providers, just like our nurse anesthetist (CRNA) counterparts.

Adding AAs to the health care workforce in Washington State will help increase the number of providers in the state and give more options to our physician Anesthesiologist colleagues and their practices for hiring. According to the Health Workforce Employment Data from the Workforce Training & Education Coordinating Board, there are fewer than 1,800 anesthesia providers (physician anesthesiologists and CRNAs) currently practicing throughout Washington State. Without AAs, health care facilities will

continue to face workforce shortages to perform the duties of an Anesthesia Care Team, especially in rural areas.

Please feel free to contact us for any additional information. I'm confident that our member programs' current and future students would jump at the opportunity to work, or go back home and work, in the Washington State.

Comment Submitted By: Pete Gauger, DDS, President, Washington State Society of Oral and Maxillofacial Surgeons

We are in support of the WSSA's efforts to license anesthesiologist assistants in Washington State. Recognizing anesthesiologist assistants is appropriate for the anesthesia care team and Washington State patients. These health care professionals have successfully completed significant accredited graduate level education and training in the administration of anesthesia.

Our own organization was involved with the creation of similar model – Dental Anesthesia Assistant – now in law as WAC 246-817-771 since 2013. The parameters that our organization championed in creating this law were based off of the Dental Anesthesia Assistance National Certification Examination (DAANCE) which is an extensive training regimen, testing, and certification. The Dental Anesthesia Assistant is a national program utilized by the majority of states who certify Dental Anesthesia Assistants.

Our members have been overwhelming supportive of using additionally trained dental anesthesia assistants. We can attest, that the dental anesthesia assistant has improved patient care and anesthesia safety.

We would conclude that a similarly trained Anesthesiologist Assistant under the supervision of anesthesiologists would similarly improve patient care and safety, as we have found in our own practices. We therefore support the WSSA's efforts to create a licensed position for their own anesthesiologist assistants.



July 15, 2021

Sunrise Review Panel
Anesthesiologist Assistant Sunrise Review
Department of Health

Via email: anesthesiology-sunrise@doh.wa.gov

Dear Sunrise Review Panel:

The Washington Association of Nurse Anesthetists (WANA), on behalf of its over 900 members, submits the following comments in response to the Washington State Society of Anesthesiologists' (WSSA) sunrise application for the licensure of anesthesiologist assistants (AAs). WANA respectfully requests that the Department of Health reject this application. **The licensure of AAs is not a viable workforce solution; will not improve access to anesthesia services; and will increase costs to the health care system. In addition, AA are not proven safe and effective.**

INTRODUCTION

A Certified Registered Nurse Anesthetist (CRNA) is an advanced practice registered nurse specializing in nurse anesthesia. CRNAs are professional registered nurses (RNs) who have obtained, through additional education and successful completion of a national examination, certification as anesthesia nursing specialists. Nurse anesthetists have been practicing for more than 150 years. They were the first professional group whose members specialized in anesthesia.

CRNAs are anesthesia experts independently licensed to practice in all 50 states and the District of Columbia. Because of their extensive education and training, CRNAs are permitted by federal and state legislation and regulations to provide every type of anesthesia service to patients without the involvement or presence of a physician anesthesiologist. All research studies on anesthesia safety and cost-effectiveness conducted in the last 20 years confirm that CRNAs provide the safest, most cost-effective anesthesia care to patients.

There are currently approximately 50,000 nurse anesthetists in the US, with 120 nurse anesthesia programs (all master's degree or Doctor of Nurse Anesthesia Practice) graduating approximately 2,500 nurse anesthetists a year. The number of new nurse anesthetists has increased dramatically over the last decade.

CRNA AND AA EDUCATION COMPARISON

CRNA Education

CRNAs are educated and trained to exercise independent judgment and to respond quickly to anesthetic emergencies. CRNAs have extensive healthcare background before entering their nurse anesthesia education program. CRNA applicants are required to be a licensed registered nurse (RN) and must complete at least one year of nursing in critical care. Overall, CRNAs receive 7-8 ½ years of formal education and preparation, from the beginning of their professional education in nursing to the graduation from nurse anesthesia school, to prepare them for their careers in anesthesia. During their education and training, CRNAs will have typically acquired over 9,300 hours of clinical patient care experience.

In Washington, Gonzaga University offers the only nurse anesthesia program in the state, the Doctor of Nurse Anesthesia Practice (DNAP). The DNAP program is housed in Gonzaga's School of Nursing and Human Physiology, as well as the School of Anesthesia at Providence Sacred Heart Medical Center. There are 42 students in the program, with 12-15 students graduating each year.

Gonzaga's admission criteria exceeds the Council on Accreditation of Nurse Anesthesia Program requirements:

- A current unencumbered, unrestricted license as a registered professional nurse and/or an APRN/ARNP in the United States or its territories or protectorates and be able to obtain a Washington and Idaho State RN license.
- A baccalaureate or graduate degree in nursing or an appropriate major, from an accredited university.
- 7 life science courses. Some examples include, but are not limited to: chemistry, biochemistry, biology, microbiology, pharmacology, physiology, pathophysiology, and anatomy.
- A minimum of one year of full-time work experience, or its part-time equivalent, as a registered nurse in a critical care setting. The applicant must have developed as an independent decision maker capable of using and interpreting advanced monitoring techniques based on knowledge of physiological and pharmacological principles.
- The Council on Accreditation of Nurse Anesthesia Programs defines critical care experience as: "Critical care experience must be obtained in a critical care area within the United States, its territories or a US military hospital outside of the United States. During this experience, the registered professional nurse has developed critical decision making and psychomotor skills, competency in patient assessment, and the ability to use and interpret advanced monitoring techniques. A critical care area is defined as one where, on a routine basis, the registered professional nurse manages one or more of the following: invasive hemodynamic monitors (e.g., pulmonary artery, central venous pressure, and arterial catheters), cardiac assist devices, mechanical ventilation, and vasoactive infusions. Examples of critical care units may include but are not limited to:

surgical intensive care, cardiothoracic intensive care, coronary intensive care, medical intensive care, pediatric intensive care, and neonatal intensive care."

AA Education

Anesthesiologist assistants are not required to have a healthcare background before entering an AA program. They are required to have a baccalaureate degree but are not required to have majored in any science.

There are 11 accredited AA Programs: Case Western Reserve University, Cleveland, Ohio; Case Western Reserve University, Houston, Texas; Case Western Reserve University, Washington, D.C.; Emory University, Atlanta, Georgia; Indiana University, Indianapolis, Indiana; Nova Southeastern University, Ft Lauderdale, Florida; Nova Southeastern University, Tampa, Florida; South University, Savannah, Georgia; University of Colorado, Denver; University of Missouri-Kansas City (UMKC); University of Wisconsin, Milwaukee, Wisconsin.

AA programs indicate that total clinical hours range from 2,000 to 2,700. Although the AA programs have a range of clinical hours requirements, these hours appear to be overstated because the programs count hours spent on activities that far exceed the actual time spent on performing an anesthesia case and administering anesthesia. For example, published descriptions of AA programs' total clinical hours include experiences apart from anesthesia time such as learning to do physicals, taking patient histories, and certification processes for life support training. These are experiences that a licensed RN has mastered prior to nurse anesthesia educational program entry.

Currently, there are just over 3000 AAs in practice, with a 10% annual growth. As of 2021, there were approximately 300 AAs graduating per year. As of 2016, the majority of AAs were in Georgia (800), Florida (225) and Ohio (221). AAs can practice in 19 jurisdictions: 14 states in law by licensure; three states by delegation by a physician; and the District of Columbia and Guam.

CRNA AND AA PRACTICE COMPARISON

CRNA practice

CRNAs are qualified to make independent judgments regarding all aspects of anesthesia care, based on their education, licensure, and certification. CRNAs provide anesthetics to patients in cooperation with surgeons, anesthesiologists, dentists, podiatrists, and other qualified healthcare professionals. CRNAs practice with a high degree of autonomy. The laws of every state permit CRNAs to work with physicians (such as surgeons) or other authorized healthcare professionals. **In Washington, CRNAs enjoy full independent practice with no supervision requirements.**

CRNAs practice in every setting in which anesthesia is delivered: traditional hospital surgical suites and obstetrical delivery rooms; critical access hospitals; ambulatory surgical centers; the

offices of dentists, podiatrists, ophthalmologists, plastic surgeons, and pain management specialists; and U.S. military, Public Health Services, and Department of Veterans Affairs healthcare facilities. In fact, CRNAs are the predominant anesthesia provider in all branches of the military and in current U.S. military conflicts.

CRNAs presence in rural Washington is significant. In Washington, CRNAs administer anesthesia in 67% of all hospitals and in 93% of all rural hospitals. In fact, CRNAs are the only anesthesia provider in 72% of all rural hospitals. Conversely, anesthesiologists practice in only 28% of rural hospitals.

AA practice

The AA most frequently practices in an urban hospital setting. **AAs cannot practice where anesthesiologists are unavailable or are not willing to work.**

AAs cannot practice in the military. The only health care facilities in Washington where CAAs are allowed to work are at Veterans Affairs (VA) facilities. However, there are currently no AAs practicing in VA facilities.

AAS ARE NOT THE WORKFORCE SOLUTION

WSSA workforce survey

WSSA cites a survey conducted by that association to show that there is a workforce shortage. That survey concluded that almost every anesthesiologist who answered the survey had an anesthesiologist position open. However, it is important to note that this is not a scientific survey and may not represent the entire profession's needs. We don't know how many respondents answered the survey (it could have been a very small sample) and where they were located. Additionally, many factors can lead to positions not being filled. Without additional information, the survey has limited applicability.

Anesthesia provider shortage

AAs are not the answer to any real or perceived anesthesia provider shortage. Because AAs are tied to anesthesiologists, they cannot go where anesthesiologists won't or don't go. They cannot cure the serious healthcare access issues that exist in rural areas, whereas CRNAs, who are not tied to anesthesiologist supervision, can. AAs cannot work and administer anesthesia when the anesthesiologist is not in the facility.

AA's effect on CRNA students

AAs could significantly harm the opportunities for CRNA students, who will likely practice in rural Washington. Every AA that is prepared may displace a CRNA who could have been prepared. At any given time, there are a limited number of clinical training opportunities for

anesthesia students. It doesn't make sense to displace student CRNAs with student AAs when CRNAs are the anesthesia providers who can practice independently have a proven safety record, and can actually increase access to care, unlike AAs.

AAS ARE NOT PROVEN SAFE AND EFFECTIVE

2018 AA/CRNA study

The applicant group cites a 2018 study published in Anesthesiology that concluded "The specific composition of the anesthesia care team (whether made up of a physician anesthesiologist and an AA or a physician anesthesiologist and a CRNA) was not associated with any significant differences in mortality, length of stay, or inpatient spending." It is important to note, however, that the article reviewed 443,098 anesthesia cases, of which 421,230 were CRNA cases and **only 21, 868 were AA cases**. CRNA cases represented 95% of the data; AAs only 5%. To compare CRNAs to AAs, the authors had to use statistical models to extrapolate the AA cases. **As a result, any conclusions made on AA safety based on this data are questionable.**

AA/Anesthesiologist ratio

AAs must work under the medical direction of an anesthesiologist, with ratios specified in law. The applicant's proposed legislation allows for a 1:4 ratio, meaning one anesthesiologist can supervise up to four anesthesiologist assistants. **We submit that this ratio is too high, based on literature studying these types of ratios, and could lead to patient harm and higher costs.**

In a 2012 article by Epstein et al¹, "Influence of supervision ratios by anesthesiologists on first-case starts and critical portions of anesthetics," supervision ratios were studied in terms of how often "medical direction" was maintained by the anesthesiologist. Medical direction means that the anesthesiologist is able to participate in the most critical portions of the anesthesia care plan. These critical portions are:

- Induction of general anesthesia
- Postincision after regional or neuraxial block and invasive line placement following induction of general anesthesia
- Turning patient between supine and prone
- Neuraxial block supervision prior to entering the OR
- Neuraxial block after entering the OR
- Regional block for postoperative analgesia placed in block room
- Emergence from general anesthesia

¹ Epstein, R. H., & Dexter, F. (2012). Influence of supervision ratios by anesthesiologists on first-case starts and critical portions of anesthetics. *Anesthesiology: The Journal of the American Society of Anesthesiologists*, 116(3), 683-691.

We can extrapolate from this article that in a ratio of one anesthesiologist to two AAs, the anesthesiologists may only meet the medical direction criteria 65% of the time. This could mean that when an anesthesiologist is supervising two AAs, they may only be successful in completing 65% of their cases under the required medical direction criteria. Thus, 35% of cases would be delayed. **Additionally, this article showed that in a 1:3 ratio, medical direction criteria was met only 1% of the time.**

A 35% failure rate of medical direction at a 1:2 ratio and a 99% failure rate at a 1:3 ratio puts patients at a serious risk of harm. This failure rate indicates that critical portions of the anesthesia care plan happened with several patients simultaneously and the anesthesiologist was not present. Because AAs are educated and trained only to practice with supervision, AAs are unable to respond independently to these critical portions of the anesthesia care plan and respond to emergencies. As a result, patients are at risk.

The Epstein article concludes that staggered start times for surgeries and additional anesthesiologists are the solution. However, these solutions will result in increased OR costs to commercial insurances, Medicare, and Medicaid programs. They will also lead to decreased efficiency in the OR resulting in fewer surgeries every day and longer wait times for patients. Increased delays result in increased costs in a less efficient system.

AAS ARE NOT THE SOLUTION FOR ACCESS TO CARE

The Anesthesia Care Team model is too costly for rural Washington

CRNAs presence in rural Washington is significant. In Washington, CRNAs administer anesthesia in 67% of all hospitals and in 93% of all rural hospitals. In fact, CRNAs are the only anesthesia provider in 72% of all rural hospitals. Conversely, anesthesiologists practice in only 28% of rural hospitals. **Given the fact that AAs must practice under the direction of an anesthesiologist, the impact that they would have in access to care in our rural communities is small.**

The applicant cites the Rural Pass-Through program as an option for AAs to work in rural Washington. In reality, this program isn't feasible. It simply doesn't offer enough funding to rural hospitals to support the Anesthesia Care Team model. That's why CRNAs administer the overwhelming majority of anesthesia in rural areas. Thus, licensing AAs will do little to create access to care in rural Washington.

ALTERNATIVES TO AA LICENSURE

More clinical sites for CRNA and anesthesiologist students

All independent anesthesia providers administering anesthesia is the solution to access to care, not creating a profession that needs supervision. One way to ensure the most robust student

pipeline into the independent anesthesia professions is to create more clinical sites for both CRNA students and anesthesiologist students.

It is extremely difficult to find clinical sites for Student Registered Nurse Anesthetists (SRNAs) in our state, especially in Western Washington. Gonzaga's program has a total of 15 clinical sites, nine of which are in Washington: Three clinical sites in Western Washington; one in the Tri-Cities; and five in Eastern Washington. These sites are not enough, however, so sites outside of Washington are also necessary. Gonzaga has 5 sites in Idaho and 1 site in Montana. The biggest barrier to expanding Gonzaga's program is clinical rotations for their students, especially first year students.

The average time to acquire a clinical site is 6 to 9 months, with many taking over a year to acquire. This is typically limited by the anesthesia group providing anesthesia at the hospitals.

Physician Assistant anesthesia practice

Currently, the Washington Medical Commission (Commission) is conducting rulemaking on physician assistant (PA) practice. Included in its proposed rule is a provision allowing physician assistants to administer general and intrathecal anesthesia if they have appropriate education and training. PAs already have the ability to administer conscious sedation with medications such as midazolam and fentanyl.

The Commission has proposed that PAs must complete an accredited anesthesiologist assistant education program in order to administer general and intrathecal anesthesia. For the record, WANA opposed this part of the rule, arguing that because PAs can practice without the supervision of a physician, they should be educated as either an anesthesiologist or a CRNA.

Since the Commission is creating a new, third, anesthesia provider for general and intrathecal anesthesia, the workforce issues cited in the applicant's report could be mitigated with this new PA practice. Therefore, it seems prudent to wait to see how many PAs become anesthesia providers before adding a fourth provider like AAs.

BILL LANGUAGE CONCERNS

In addition to our comments on the sunrise application, WANA has concerns with the applicant's proposed legislation and is opposed to the proposed bill. Our concerns focus on Section 1, the definition of "supervision;" Section 3, the creation of the anesthesiologist advisory committee; Section 4, the definition of supervision and the establishment of a 1:4 ratio of anesthesiologists to AAs; and Section 5, the AA scope of practice.

Supervision definition

Section 1(6) defines supervision as: "the ready, on-site availability of the supervising anesthesiologist for consultation and direction of the activities of the anesthesiologist

assistant.” **This definition of supervision is too broad, allowing for more than medical direction.**

This definition is in line with physician assistant’s unsupervised practice but is not appropriate for AA practice. According to this definition, the anesthesiologist only needs to be on-site. In a hospital, for example, the anesthesiologist could be on another floor, far away from the operatory. The anesthesiologist would not be able to respond to an anesthesia emergency quickly and patients could be at risk.

This definition also states that the Commission will establish requirements and limitations on practice, including being on-call. **Being on-call does not meet the requirement of being on-site, thus does should not be allowed.**

Anesthesiologist assistant advisory committee

Section 3 establishes an anesthesiologist assistant advisory committee within the Commission. **This is an unnecessary committee, given the low numbers of AAs practicing in a limited number of states.** If AAs were to be established in Washington, those same low numbers would be expected here.

Additionally, the Commission has only one advisory committee currently, the Health Equity Advisory Committee. According to the Commission, this committee’s purpose is to “review Washington Medical Commission (WMC) rules, policies, procedures, and guidelines to ensure healthcare equity for all patients regardless of race, ethnicity, language, religion, age, spiritual practice, sexual orientation, gender identity or expression, socioeconomic class and mental or physical status.” This committee covers an important topic applicable to all of the professions regulated by the commission, including physicians and physician assistants. An anesthesiologist assistant advisory committee does meet the threshold of work that the Commission has used to establish advisory committees, thus it should be rejected.

Anesthesiologist/AA ratio

Section 4 establishes a 1:4 ratio, meaning one anesthesiologist can supervise up to four anesthesiologist assistants. As we have explained earlier in this document, **this ratio is too high, based on literature studying these types of ratios, and could lead to patient harm and higher costs.**

AA scope of practice

Section 5 establishes the scope of practice for an anesthesiologist assistant. It states that an anesthesiologist assistant “may perform those duties and responsibilities delegated to them by the supervising anesthesiologist, and for which they are competent to perform based on their education, training, and experience.” That section lists these duties and responsibilities.

However, that section also includes the phrase “including but are not limited to,” implying that there are further duties that could be part of the AA scope of practice.

The inclusion of this phrase is concerning. It would allow additions to the AA scope of practice by the AA or the supervising anesthesiologist. **For full transparency, the AA scope of practice should be established in the legislation, subject to input from the Legislature and stakeholders. The phrase “including by not limited to” should be removed from the bill.**

Section 5 also contains another concerning phrase. Section 5(a) allows AAs to perform “preoperative anesthetic evaluations, postoperative anesthetic evaluations, and patient progress notes, all to be cosigned by the supervising physician within 24 hours.” (Emphasis added). Allowing an anesthesiologist to cosign within 24 hours is not consistent with the supervision language established in Section 1(6). **This implies that the anesthesiologist is not directing the activities of the anesthesiologist assistant. This phrase should also be removed from the bill.**

CONCLUSION

WANA appreciates the opportunity to provide comments in response to the Washington State Society of Anesthesiologists’ (WSSA) sunrise application for the licensure of anesthesiologist assistants (AAs). We respectfully request that the Department of Health reject this application. **Licensure of AAs is not a viable workforce solution; will not improve access to anesthesia services; and will increase costs to the health care system. In addition, AA are not proven safe and effective.**

Thank you for the opportunity to provide comments on behalf of WANA.



Ellen Kraus-Schaeffer, RN, ARNP, CRNA
President

May 7, 2021

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President

Mika Sinanan, MD, PhD
President-Elect

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Health Systems Quality Assurance
Department of Health
101 Israel Road SE
Tumwater, WA 98501

RE: CAA sunrise review application

To Whom It May Concern,

On behalf of the Washington State Medical Association (WSMA), I'm writing in support of the Washington State Society of Anesthesiologists' (WSSA) application for a sunrise review to consider creation of the certified anesthesiologist assistant (CAA) profession in our state.

CAAs are currently practicing safely and effectively under the direction of physician anesthesiologists in 17 other states. CAAs have advanced graduate degrees and are required to complete a comprehensive didactic and clinical program at the graduate school level. They are trained extensively in the delivery and maintenance of quality anesthesia care as well as advanced patient monitoring techniques. Under the guidance of a physician, CAAs administer drugs, obtain vascular access, apply and interpret monitors, establish and maintain a patient's airway, and assist with preoperative assessment.

The WSMA supports the creation of the CAA profession. According to a recent survey conducted by WSSA, almost 60% of practices in our state currently have positions open for anesthesiology providers. Of those practices, 70% of them have had the positions open for six months or longer. We also know that both anesthesiologists and nurse anesthetists are highly concentrated in the I-5 corridor – this is problematic for patients and practitioners living and working in more rural parts of the state. The demonstrated need for highly-trained and qualified anesthesia providers working under the supervision of a physician anesthesiologist merits the Department's consideration of the sunrise review application.

Thank you for the opportunity to share our support for WSSA's sunrise review application. We appreciate your consideration. Should you have any follow-up questions, please contact [WSMA Policy Analyst Billie Dickinson](#).

Sincerely,



Jeb Shepard
Director of Policy

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Dear Sunrise Review Member:

ARNPs United of Washington State (AUWS), who represents over 9,000 Advanced Practice Nurses (Nurse Practitioners, Nurse Anesthetists, Nurse Midwives, and Clinical Nurse Specialists) urges you to **reject** the sunrise review application regarding licensure for anesthesiologist assistants (AA).

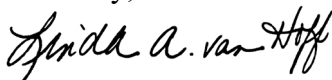
AAs will not improve access to care for Washingtonians. Since they cannot practice without anesthesiologist supervision, AAs do not practice in rural areas where CRNAs working without anesthesiologist involvement are the primary providers of anesthesia care. In fact, CRNAs are the only anesthesia provider in 72% of Washington's rural hospitals. AAs, in contrast, can only practice where anesthesiologists practice, which greatly limits their utilization. AAs, therefore, can't help solve problems of inadequate access to anesthesia care in rural and underserved communities.

In contrast, Certified Registered Nurse Anesthetists (CRNAs) are certified anesthesia experts independently licensed to practice in all 50 states and the District of Columbia. Because of their extensive education and training, CRNAs are permitted by federal and state laws and regulations to provide every type of anesthesia service to patients without the involvement or presence of a physician anesthesiologist. All research studies on anesthesia safety and cost-effectiveness conducted in the last 20 years confirm that CRNAs provide the safest, most cost-effective anesthesia care to patients.

AAs are an unproven provider. No peer-reviewed studies in scientific journals have been published regarding the quality of care of AA practice or AA anesthesia outcomes. The quality of care that AAs provide is unproven, as there is no meaningful research data concerning AA anesthesia safety. In contrast, the excellent, safe anesthesia care that CRNAs provide and associated anesthesia outcomes have been repeatedly demonstrated in peer-reviewed studies published in prominent journals.

It makes no sense to authorize AAs, a less qualified anesthesia provider that can only work with anesthesiologists and can't be used in any area where anesthesiologists don't practice, such as many rural locations. Please reject the application for licensure of anesthesiologist assistants.

Sincerely,



Linda A. van Hoff ARNP
President, ARNPs United of WA State

July 5, 2021

Washington State Department of Health

To whom it may concern,

I am writing in support of the Washington State Society of Anesthesiology's proposal to regulate the licensure of Certified Anesthesia Assistants (CAAs) for the practice of anesthesia in the state of Washington (<https://www.doh.wa.gov/Portals/1/Documents/2000/2021/AnesthesAsst-App%20Report.pdf>).

Our practice adheres to a high standard of care by a care team model with physician anesthesiologists directing delivery via certified registered nurse anesthetists (CRNAs). In recent years, our ability to provide care via the care team model has been limited by the ability to staff enough CRNAs, due to the lack of CRNA availability in the workforce.

CAAs are well-trained and qualified professionals who fill a crucial role in the anesthesia care team model in multiple other states. By accepting the WSSA's proposal, the DOH would help expand the anesthesia workforce and improve the efficiency of anesthesia care via the care team model.

Sincerely,

Eric Ehieli, MD

(267) 987-6820

eric.ehieli@gmail.com

July 5, 2021

Washington State Department of Health

Dear Sir/Madam,

I am writing to express my full support of the Washington State Society of Anesthesiology's (WSSA's) proposal (<https://www.doh.wa.gov/Portals/1/Documents/2000/2021/AnesthesAsst-App%20Report.pdf>) to regulate the licensure of Certified Anesthesia Assistants (CAA's) for the practice of anesthesia in the state of Washington.

As illustrated in the WSSA's proposal, CAA's are very well trained and qualified health care professionals filling a crucial role in Anesthesia Care Team model delivery of anesthetic care in fifteen other states.

I have served as president of Anesthesia Associates, P.S., in Spokane, WA for the last two and a half years. Our anesthesia group consists of 29 physician anesthesiologists and 21 Certified Nurse Anesthetists (CRNA's). We deliver a very high standard of anesthesia care via the Anesthesia Care Team model, with physician anesthesiologists directing delivery via CRNA's. This model is well suited to provide a very high quality of care while meeting the economic demands of our community health care systems.

Over the last few years, we have been severely limited in our ability to staff sufficient CRNA's. A gap exists in the availability of this workforce, and in speaking with several similar anesthesia groups in the state of Washington our experience is not unique.

I strongly encourage acceptance of the WSSA's proposal to expand Washington State's anesthesia workforce via DOH regulation of CAA practice in our state.

Sincerely

A handwritten signature in black ink, appearing to read 'Todd Cannon', with a stylized flourish at the end.

Todd Cannon, MD
President, Anesthesia Associates, P.S.
206.406.1977
todd.cannon@hotmail.com

6/30/2021

Sherry Thomas

Anesthesiologist Assistant Sunrise Review Lead

Health Systems Quality Assurance

Washington State Department of Health

Sent via email to: anesthesiology-sunrise@doh.wa.gov

Dear Ms. Thomas,

My name is Cayla Dittmer. I am a certified anesthesiologist assistant moving to Washington within the year for my spouse's dermatopathology fellowship. Additionally, we have family in Washington that is compelling us to stay after the fellowships completion. I currently work as an Anesthesiologist Assistant (AA) at St. Louis University Hospital in St. Louis, Missouri as Washington doesn't currently recognize my license or skill set. It would change my families future if Washington recognized my license.

I am here to testify in strong support of the sunrise application for the licensure of anesthesiologist assistants in Washington, which would authorize the support for legislation to license and regulate anesthesiologist assistants also known as AA's. Enactment of this measure would provide the residents of Washington access to the benefits AAs currently provide—benefits that patients in 18 jurisdictions already receive from AAs today. I, along with my other AA colleagues, provide high quality and affordable anesthesia care to our patients.

I got my undergraduate degree from the University of Iowa and I completed my Masters of Medical Sciences in Anesthesia, to become an anesthesiologist assistant, at Nova Southeastern University in Tampa, Florida. I have been practicing for 6 years. First at the University of Wisconsin Hospitals and Clinics, and now at St. Louis University Hospital.

I, as an AA, am a highly trained anesthesia provider with a master's degree who ensures I provide high quality anesthetic care to my patients regardless of their background or ability to pay. I work alongside my physician anesthesiologist colleagues under medical direction to implement anesthesia care plans. I work exclusively within the anesthesia care team (ACT) environment, meaning patients will always have two brains, two sets of hands and two sets of eyes involved in their care.

All AAs possess a premedical undergraduate background and complete a comprehensive didactic and clinical program at the graduate school master's degree level. The typical AA master's program is 24 to 28 months. We are trained extensively in the delivery and maintenance of quality anesthesia care as well as advanced patient monitoring techniques. We understand all the disease states, pharmacology and all other factors that can influence anesthetics and ensure we provide high quality care to our patients. In multiple states, we were utilized during the Covid Pandemic to assist with the management, breathing device placement and invasive line placement of critically ill patients.

My profession is an established profession that has been serving patients for over five decades, we have been around since 1968. AAs are recognized by the Centers of Medicare and Medicaid (CMS), Tri-care, and all major commercial insurance payors. CMS recognizes AAs as qualified non-physician anesthesia providers, just like our nurse anesthetists (CRNA) counterparts. AAs are as safe and effective as nurse anesthetists.

There is no peer-reviewed or other credible evidence of any sort that the care provided by an anesthesiologist assistant is less safe than that of a nurse anesthetist. In October of 2018, there was a study published in the reputable Journal, Anesthesiology, that concluded "The specific composition of the anesthesia care team was not associated with any significant differences in mortality, length of stay, or inpatient spending."

As a practicing CAA for 6 years and a future Washington resident, I strongly encourage your support of the Anesthesiologist Assistant Sunrise Application for legislation of AA's so Washington patients can

benefit from the highly trained care AAs provide. I would love to be able to return home and take care of patients in Washington.

Thank you for your consideration.

Cayla Dittmer, AA, MMHSc
Cell phone: 563-508-0998
Email: Cayladittmer@gmail.com

Dear Sunrise Review Panel Member:

My name is Kaori Donohue. I live in Lakewood, WA, and practice as a Certified Registered Nurse Anesthetist (CRNA) at Multi-specialty Clinic Ambulatory Procedure Center in Olympia. I provide anesthesia service for adults going under elective gastrointestinal endoscopy procedures (e.g., screening colonoscopy). I am an immigrant from Japan and have become a naturalized U.S. citizen 24 years ago. I received nursing and anesthesia education in the U.S. and obtained Ph.D. in nursing from the Oregon Health & Science University. I am writing this letter urging you to oppose the sunrise review application regarding licensure for anesthesiologist assistants (AA) in Washington.

CRNAs have been providing anesthesia care to Americans for over 150 years. CRNAs are educated at doctoral-level graduate schools and extensively trained to be licensed to practice full-scope anesthesia independently in all 50 states plus Washington D.C. Especially in rural communities, CRNAs are often the only anesthesia providers in a variety of healthcare settings, such as critical access hospitals, ambulatory surgery centers, doctor's offices, and pain clinics. I was previously one of those rural CRNAs working for American Indians in Oklahoma and the Navajo Nation. In the Navajo hospital, six CRNAs including myself provided all anesthesia services including 24-7 call coverage. Since 2013, I have been working at outpatient ambulatory surgery centers independently. Often, I am the only anesthesia provider within the facility.

On the other hand, AAs are licensed by 15 states and Washington D.C only. While CRNAs are trained to independently provide the full spectrum of anesthesia service, AAs are limited to provide only a supportive role to physician anesthesiologists with their physical presence on site. This means that rural underserved communities which are experiencing anesthesia provider shortage would not benefit from AAs, because AAs can only work with anesthesiologists, not CRNAs. Even in urban health care settings with a favorable physician availability, AAs cannot work during supervising anesthesiologist's absence. (e.g., personal time off, sickness, off-site locations). CRNAs are fully credentialed to work with or without anesthesiologists.

The most cost-effective, efficient solution for chronic anesthesia provider shortage, particularly in rural communities, that also promotes anesthesia patient safety and satisfaction is NOT introducing *extra* people who cannot deliver anesthesia by themselves, such as AAs at additional cost. Rather, making *full use* of CRNAs and anesthesiologists who are already in the workforce will provide *immediate* relief for anesthesia provider shortage by allowing CRNAs to practice to their full scope of practice independently.

I thank you for allowing me to express my concern over the sunrise review application regarding licensure for AAs in Washington. Please reject the application for licensure of AAs.

Sincerely,

Kaori Donohue, Ph.D., CRNA
Lakewood, WA

Sherry Thomas
Anesthesiologist Assistant Sunrise Review Lead
Health Systems Quality Assurance
Washington State Department of Health

Sent via email to: anesthesiology-sunrise@doh.wa.gov

Dear Ms. Thomas,

On behalf of the Washington State Psychiatric Association (WSPA), we are writing to express our organization's support for licensing anesthesiologist assistants (AA) in Washington state. WSPA is a branch of the American Psychiatric Association, the largest Psychiatric organization in the world. It is a professional, non profit organization representing more than 500 psychiatrists in the state.

The federal Centers for Medicare and Medicaid Services (CMS) recognize anesthesiologist assistants as non-physician anesthesia providers, as they do nurse anesthetists. As we understand it, the Washington Medical Commission recently proposed rules to regulate when physician assistants may administer anesthesia, which define adequate education and training for administering general and intrathecal anesthesia as "completion of an accredited anesthesiologist assistant program." AA's are recognized health profession practicing throughout the country, licensed in 17 states. In an effort to address Washington's profound workforce shortage, establishing an AA state licensure could help bring trained professionals into Washington.

It's important to WSPA that the Washington State Anesthesia Society also supports and was the applicant for this proposal. We appreciate that an AA would work under the supervision of an anesthesiologist, would have an advanced graduate degree and complete a comprehensive didactic and clinical program at the graduate school level. AAs are also trained extensively in the delivery and maintenance of quality anesthesia care as well as advanced patient monitoring techniques.

Sincerely,



Eric Loraas, M.D.
President
Washington State Psychiatric Association

July 14, 2021

Sherry Thomas
Anesthesiologist Assistant Sunrise Review Lead
Health Systems Quality Assurance
Washington State Department of Health
Sent via email to: anesthesiology-sunrise@doh.wa.gov

Dear Ms. Thomas,

My name is Sarah Brown. I am a Certified Anesthesiologist Assistant and I currently live in Washington and have lived here for nearly six years. I relocated to Seattle from Atlanta in 2015 when I decided to pursue a second master's degree. I met my husband in Seattle and our family has now relocated to Spokane so he can continue his career in Washington. I currently work as an Anesthesiologist Assistant (AA) at Atlanta Medical Center in Atlanta, GA, as Washington does not currently recognize my license or skill set. I have to travel to Atlanta to practice my profession and skill set, which means I have to regularly be away from my family in order to support us financially.

I am writing to testify in strong support of the sunrise application for the licensure of Anesthesiologist Assistants in Washington, which would authorize the support for legislation to license and regulate Anesthesiologist Assistants also known as AAs. Enactment of this measure would provide the residents of Washington access to the benefits AAs currently provide—benefits that patients in 18 jurisdictions already receive from AAs today. I, along with my other AA colleagues, provide high quality and affordable anesthesia care to our patients.

I have been a practicing AA for 10 years. I received my undergraduate degree from The University of North Georgia in 2008 and I completed my Masters of Medical Science in Anesthesiology, to become an Anesthesiologist Assistant, at Emory University School of Medicine in 2011. Upon completion of my training, I became licensed in the state of Georgia, and worked at Northeast Georgia Medical Center in Gainesville, GA and Atlanta Medical Center in Atlanta, GA before I relocated to Seattle. I wanted to work as an AA in Washington but due to the state not recognizing my profession, I haven't been able to do so.

As an AA, I am a highly trained anesthesia provider. I provide high quality anesthetic care to my patients regardless of their background or ability to pay. I work alongside my physician anesthesiologist colleagues under medical direction to implement anesthesia care plans. I work exclusively within the anesthesia care team (ACT) environment, meaning patients will always have at least two brains, two sets of hands and two sets of eyes involved in their care.

All AAs possess a premedical undergraduate background and complete a comprehensive didactic and clinical program at the graduate school master's degree level. The typical AA master's program is 24 to 28 months. We are trained extensively in the delivery and maintenance of quality anesthesia care as well as advanced patient monitoring techniques. We understand all the disease states, pharmacology and all other factors that can influence anesthetics and ensure we provide high quality care to our patients. In multiple states, we were utilized during the COVID-19 pandemic to assist with the management, breathing device placement and invasive line placement of critically ill patients. **During the pandemic, I applied and was approved as an Emergency Volunteer Health Practitioner by the WA Department of Health. I was pregnant at the time and elected to not expose myself further to COVID-19; nonetheless, my GA medical license was deemed by the WA DOH as sufficient and valuable in a state of emergency.**

My profession is an established profession that has been providing safe anesthesia care since 1968. AAs are recognized by the Centers of Medicare and Medicaid (CMS), Tri-care, and all major commercial insurance payors. CMS recognizes AAs as qualified non-physician anesthesia providers, just like our nurse anesthetists (CRNA) counterparts. AAs are as safe and effective as nurse anesthetists.

There is no peer-reviewed or other credible evidence of any sort that the care provided by an anesthesiologist assistant is less safe than that of a nurse anesthetist. In October of 2018, there was a study published in the reputable journal, *Anesthesiology*, that concluded: "The specific composition of the anesthesia care team was not associated with any significant differences in mortality, length of stay, or inpatient spending."

As a licensed and practicing AA for 10 years and a Washington citizen, I strongly encourage your support of the Anesthesiologist Assistant Sunrise Application for legislation of AAs so Washington patients, including my family and friends, can benefit from the highly trained care that AAs provide. I would love to be able to work in the state I call home!

Thank you for your consideration.

Sarah Brown, AA, MMSc
770.654.3485
Sarah.rebecca.brown@gmail.com

April 12, 2021

Umair A. Shah, MD, MPH
Washington State Secretary of Health
Washington State Department of Health
PO Box 47890
Olympia, Washington 98504-7890

Re: Support of Certified Anesthesiologist Assistant Licensure

Dear Secretary Shah,

On behalf of the more than 54,000 members of the American Society of Anesthesiologists (ASA), **I am writing in strong support of licensure of certified anesthesiologist assistants (CAAs)**. Licensure of these medical professionals would allow CAAs to utilize their unique team-based skills and practice in Washington State, as well as provide your residents access to the benefits CAAs provide — benefits that patients in 17 jurisdictions already receive from CAAs.

ASA Policy

ASA strongly believes in the Anesthesia Care Team (ACT) and supports CAA practice authorization in all states.¹ We actively encourage our members to promote enabling legislation that would authorize licensing of CAAs.

CAAs are Key Members of the Anesthesia Care Team

CAAs are highly trained master's degree level non-physician anesthesia care providers. They work under the medical direction of physician anesthesiologists to implement anesthesia care plans. CAAs work exclusively within the ACT environment as described by ASA. ACTs consist of a supervising anesthesiologist and from 1 to 4 non-physician anesthesia providers (i.e., CAAs, nurse anesthetists, or anesthesiology physician residents/fellows). All CAAs possess a premedical undergraduate background and complete a comprehensive didactic and clinical program at the graduate school master's degree level. They are trained extensively in the delivery and maintenance of quality anesthesia care as well as advanced patient monitoring techniques.

¹ See ASA Standards, Guidelines and Statements: Statement on the Anesthesia Care Team available at <http://www.asahq.org/~media/Sites/ASAHQ/Files/Public/Resources/standards-guidelines/statement-on-the-anesthesia-care-team.pdf>

When hospitals, surgery centers, and related institutions choose to utilize the physician-led ACT approach to patient care, those facilities should be authorized to do so with any qualified anesthesia provider and NOT be deprived the choice of qualified, medically-based trained CAAs.

Education & Training

CAAs undergo rigorous and advanced graduate education focusing on the ACT approach to anesthesia practice. The typical AA master's program is 24 to 28 months. As a pre-requisite for admissions, applicants must hold a bachelor's degree, complete the same pre-medical course work that physicians complete, and score competitively in upper percentiles on the MCAT (Medical College Admission Test). AA master's degree programs are accredited by the Commission for the Accreditation of Allied Health Educational Programs (CAAHEP), a national accrediting body certifying 2000 educational programs in 23 different allied health professions. AAs must pass a certification examination administered by the NCCAA (National Commission for Certification of Anesthesiologist Assistants) in collaboration with the National Board of Medical Examiners. Finally, they must complete 40 hours of continuing medical education every two years and complete a recertification exam every six years.

CAAs and Nurse Anesthetists Are Clinically Interchangeable

CAAs are as safe and effective as nurse anesthetists. There is no peer-reviewed or other credible evidence of any sort that the care provided by a CAA is less safe than that of a nurse anesthetist. My physician anesthesiologist colleagues who work with both CAAs and nurse anesthetists can attest to the complete interchangeability of the two types of non-physician anesthesia providers.

Throughout more than four decades where physician anesthesiologists and CAAs have worked together, patients have enjoyed increased access to care with a demonstrated and impeccable safety record. More than 80 percent of all anesthetics throughout the United States are delivered in the ACT model of care. The supervising physician anesthesiologist does not perform their own cases while supervising ACT members and must be immediately available at all times. ACTs operate in every state in the country and this type of practice is a long established and safe model for providing anesthesia care.

It is the position of ASA that both CAAs and nurse anesthetists have identical patient care responsibilities and technical capabilities – a view in harmony with their equivalent treatment under the Medicare Program. The proven safety of the ACT approach to anesthesia with either CAAs or nurse anesthetists serving as the non-physician anesthetists confirms the wisdom of this view. Moreover, a 2018 study published in the peer-reviewed journal *Anesthesiology* further confirmed this fact when it examined care

between a physician anesthesiologist – nurse anesthetist team and a physician anesthesiologist – anesthesiologist assistant team. The results found “the specific composition of the anesthesia care team was not associated with any significant differences in mortality, length of stay, or inpatient spending.”²

Conclusion

On behalf of ASA, I strongly encourage your support of CAA licensure in Washington State so your citizens can benefit from the highly trained care CAAs currently provide in 17 jurisdictions. Thank you for your consideration of this important effort. Should you have any questions, please feel free to contact Jason Hansen, MS, JD, Director of State Affairs, at j.hansen@asahq.org.

Sincerely,

A handwritten signature in cursive script that reads "Beverly K Philip MD".

Beverly K. Philip, MD, FACA, FASA
President

² Sun EC, Miller TR, Moshfegh J, Baker LC. Anesthesia care team composition and surgical outcomes. *Anesthesiology* 2018; 129:700-09

July 7, 2021

Sherry Thomas
Anesthesiologist Assistant Sunrise Review Lead
Health Systems Quality Assurance
Washington State Department of Health

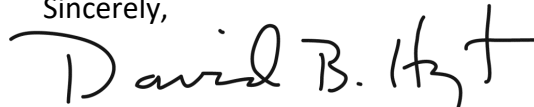
Dear Ms. Thomas:

The American College of Surgeons (ACS) is the largest surgical organization with over 80,000 members worldwide. The ACS strongly supports the licensure of Certified Anesthesiologist Assistants (CAAs) to help ensure surgical patients in Washington are receiving high quality anesthesia care from those who are well-educated and trained to provide this care. CAAs are highly skilled health professionals who work under the direction of licensed physician anesthesiologists to implement anesthesia care plans.

Certified Anesthesiologist Assistants have successfully practiced for many years in 17 jurisdictions under the supervision of physician anesthesiologists within the confines of the surgical/anesthesia team, providing high quality anesthesia services with good surgical patient outcomes. Upon completion of their education which includes a minimum of 2,000 clinical hours of training, they receive a Master's degree. Additionally, they receive certification after successful completion of the certifying exam administered by the National Commission for Certification of Anesthesiologist Assistants.

Physician anesthesiologists and surgeons have worked well with CAAs for many years; permitting licensure of this qualified health care provider would be beneficial to Washington's citizens. As such, I urge you to support CAA licensure in Washington State.

Sincerely,

A handwritten signature in black ink that reads "David B. Hoyt". The signature is written in a cursive, flowing style with a large initial "D" and a stylized "Hoyt".

David B. Hoyt, MD, FACS
Executive Director



MultiCare Health System

820 A Street, Tacoma, WA 98402

PO Box 5299, Tacoma, WA 98415-0299 ~ multicare.org

July 15, 2021

Sherry Thomas
Anesthesiologist Assistant Sunrise Review Lead
Health Systems Quality Assurance
Washington State Department of Health

Dear Ms. Thomas,

I am writing to express MultiCare's support for the licensing of certified anesthesiologist assistants (CAAs) in Washington state.

MultiCare has been caring for communities in Washington state since the founding of Tacoma's first hospital in 1882. Today our organization is the largest, not-for-profit, community-based, locally owned system of health in the state of Washington. We serve patients from around the Pacific Northwest and provide a comprehensive range of health services, including numerous inpatient care, primary care, virtual care, urgent care, dedicated pediatric care and specialty care.

It is in the best interest of the people of Washington for the state to continuously work to ensure a more robust health care workforce. One of the biggest barriers MultiCare — as well as other health systems across the country — faces in our ability to deliver care to the communities we serve is shortage of available health care professionals.

Certified anesthesiologist assistants are well-educated and specifically trained to administer all types of anesthesia under the supervision of an anesthesiologist. Eighteen states already allow certified anesthesiologist assistants to engage in clinical practice and administer anesthesia. Anesthesiologist assistants are recognized by the Centers for Medicare and Medicaid and the US Department of Veterans Affairs as anesthesia providers.

Adding CAAs to the health care workforce in Washington could provide greater access to care for patients while lowering costs, as CAA salaries are typically lower than those of anesthesiologists. Also, increased use of the Anesthesia Care Team model could allow hospitals to utilize qualified Advanced Practice Providers like CAAs to staff operating rooms more efficiently.

MultiCare believes licensing for anesthesiologist assistants would help the people of Washington who require care and would strengthen our state's health care infrastructure as a whole. We urge the Department to support their licensure and make it possible for CAAs to become a be part of anesthesia care teams in Washington.

Thank you for your time and consideration of this issue.

Best regards,

A handwritten signature in black ink that reads "Ingrid S. Gourley Mungia".

Ingrid S. Gourley Mungia, JD
Executive Director, Government Relations

Statement of WSPA Support for the CAA Scope-of-Practice Sunrise Application, Summer 2021

The Washington State Psychological Association (WSPA) reviewed the Sunrise Application, submitted to the Washington State Department of Health (DOH) to create a license for Anesthesiology Assistants in Washington State. Certified Anesthesiology Assistants (CAAs) are licensed in fifteen states and U.S. territories and have delegatory authority in two additional states. Based on our review of the application, WSPA **supports** this proposed credentialing of CAAs in the state of Washington. The Applicant has addressed public safety by clarifying the training, supervision, continuing education and disciplinary procedures required. Anesthesiology Assistants have further shown evidence that the proposed procedures and authority are already practiced safely and effectively by CAAs in other states.

The case for the expansion of scope of practice for non-physician trained healthcare providers has become even more compelling with significant shortages of physician providers. Support nationally for scope of practice expansion for non-physician providers continues to grow and is predicated on demonstrable evidence (e.g., Dower, Moore, & Langelier, 2013; Institute of Medicine, Safriet, 2002). Psychologists are trained in biopsychosocial models that emphasize the importance and interdependence of physical, emotional and social health. We are acutely aware that physical well-being and health are paramount to a patient's behavioral health. Increased access to medical care that is safe and effective is an important factor in the overall well-being of our shared patients. In light of the evidence provided by the Applicant, adding CAAs as a regulated health professional in Washington will allow expansion to a field that cannot fill positions to meet demand. Expansion of the provider pool will improve access to safe and effective anesthesiology services in Washington State. WSPA support CAAs in their pursuit to provide greater access to these services.

Dower, C., Moore, J., & Langelier, M. (2013). It is time to restructure health professions scope-of-practice regulations to remove barriers to care. *Health Affairs*, 32 (11). <https://doi.org/10.1377/hlthaff.2013.0537>

Institute of Medicine (US) Committee on the Robert Wood Johnson Foundation Initiative on the Future of Nursing, at the Institute of Medicine. (2011). *The Future of Nursing: Leading Change, Advancing Health*. Washington (DC): National Academies Press (US). PMID: 24983041.

Safriet, B.J. (2002). Closing the gap between can and may in healthcare providers' scopes of practice: A primer for policymakers. *Yale J Regul.* 2002;19(2):301-34.



111 Israel Road SE, Tumwater, WA 98501

DATE: July 8, 2021

TO: Washington State Department of Health,
Anesthesiologist Assistant Sunrise Review Panel

FROM: *MM* Micah Matthews, Deputy Executive Director
Washington Medical Commission

SUBJECT: Anesthesiologist Assistants DOH Sunrise Review

The Washington Medical Commission (WMC) is the regulatory body for the practice of Allopathic Medicine, also referred to as conventional medicine. The WMC currently regulates about 35,000 physician and physician assistant licenses, approximately 31,000 MDs and more than 4,000 PAs.

It is the purpose and responsibility of the WMC to protect the public, by ensuring quality healthcare is provided by our licensed practitioners. The WMC establishes, monitors, and enforces qualifications for licensure, consistent standards of practice, and continuing competency. Rules, policies, and procedures developed by the WMC promote the delivery of quality healthcare to the people in Washington.

I thank the Washington Department of Health for the opportunity to review and comment during their Sunrise Review regarding the creation of a new license for Certified Anesthesiologist Assistant (CAAs). The proposal appears to clearly meet the three legal criteria for a Sunrise Review of a health profession in Washington.

Further, it is appropriate for the WMC to regulate CAAs licensure, which represents the highest level of regulation. This license type would operate within higher risk practice categories and in a model similar to PAs. As the WMC is the exclusive regulator of PAs in Washington, its involvement and proposed oversight with CAA licensing is important and appropriate.

In my role with the WMC, I am generally supportive of the proposal¹ from the Washington State Society of Anesthesiologists. However, I request a few modifications to the draft bill H-1421² to better facilitate implementation:

- Washington has three levels of regulation: registration, certification, and licensure. This proposal creates a licensed profession, but the proposed title is Certified Anesthesiologist Assistant. For clarity, and to conform with other license types, we request that the regulatory title be changed to Anesthesiologist Assistant (AA) and leave the certification language to

apply to those that have passed the national exam. This is in keeping with the same model that applies to PAs and their certification and recertification exams.

- I request 24 months be included in the assumptions to complete rulemaking prior to launching the license type.
 - Rulemaking must legally follow a timeline set forth by the Washington Administrative Procedure Act². Providing the WMC with this window for rulemaking reduces legal ambiguity, which is inherent in launching a new credential without rules. Lacking this time, the WMC could be forced to issue a license to an unqualified applicant through an unforeseen or not yet addressed loophole. A complete set of rules minimizes this risk.
 - Of special note is section four, which requires limitations through rulemaking on practice, supervision ratios, and on-call supervision scenarios. These requirements *must* be clear prior to the WMC issuing the first license to an AA.
- I request at minimum twelve months for rulemaking regarding section two, which requires creation of a fee. The setting of fees is under the Secretary's authority and not subject to WMC control. We ask that twelve months be built into the proposal to allow for fee creation prior to the establishment of the new license.
- I recommend changes to the language in section 2 sub 2(b). Good moral character is subjective and generally not enforceable. We recommend removal of such verbiage in all licensing standards in favor of clearer language that references criminal history verification and a background check as is usual and customary to our existing licensing processes.
- I recommend deletion of the first use of the word disciplinary in section 2 sub 3(a). Not all action taken for licensing purposes is considered disciplinary.
- I ask for the deletion of section three. Section three, which creates a new AA advisory committee, both creates a redundancy and a legal challenge.
 - The WMC has panels in place for issuing licenses, considering complaints, case disposition, and policy. These panels were appropriately established through the WMC bylaws, in accordance with good governance practices, and should not be defined in statute.
 - The ability of the WMC to appoint pro tem members, as defined in current statute RCW 18.71.015⁴ is sufficient legal authority to accomplish the goals stated in Section 3. However, amending current statute to require an additional two AAs within the Governor's appointment process would be appropriate and allow the WMC to integrate the professional experience of AAs into all aspects of its regulatory work as we do with PAs and public members currently. The total number of Governor appointees to the

WMC would rise to 23.

- The WMC cannot legally comply with Section three in the appointment of an AAs to the committee. There will be no licensed AA by that time, as the profession will not have been formally launched by the bill effective date.
- I request that some sections of the language be amended for clarity and consistency:
 - Section 5 sub (1)bb add: "Performing such other tasks not prohibited by law and authorized by the Commission in rule under the supervision...."
 - Section 7: add language to clarify there is no countersigning requirement on the supervising physician unless required by federal law.
 - Section 8(1) appears to be duplicative of section 2(3)(a).
- To facilitate informed consent, it is recommend to add AAs to the list of practitioners in RCW 7.70.050⁵. The WMC has legal guidance from the Attorney General's office regarding the requirements of the Informed Consent State Law in Washington and practitioners.
- It is my final, general recommendation, that AAs be added as a profession where appropriate to various statutes to allow for recognition and practice continuity - such as the insurance, Medicaid, and other statutes.

Thank you for your time, consideration and recognition of the requests from the Washington Medical Commission regarding the Sunrise Review to examine the creation of anesthesiologist assistants as a new license type. If you have any questions or follow up requests, please contact me at your convenience.

¹ Legislative proposal being reviewed under the sunrise process, Certified Anesthesiologist Assistant (CAA), Title 18 RCW <https://www.doh.wa.gov/Portals/1/Documents/2000/2021/AnesthesAsst-App%20Report.pdf>

² Code Revisers Office draft proposal: licensing anesthesiologist assistants.

<https://www.doh.wa.gov/Portals/1/Documents/2000/2021/H14211-AnesthesAsstDraftBill.pdf>

³ Revised code of Washington Administrative Procedure Act <https://app.leg.wa.gov/rcw/default.aspx?cite=34.05>

⁴ RCW 18.71.015 establishing the Washington Medical Commission <https://app.leg.wa.gov/rcw/default.aspx?cite=18.71.015>

⁵ Failure to secure informed consent <https://apps.leg.wa.gov/rcw/default.aspx?cite=7.70.050>



STATE OF WASHINGTON
HEALTH CARE AUTHORITY

626 8th Avenue, SE • P.O. Box 45502 • Olympia, Washington 98504-5502

July 16, 2021

Sherry Thomas
Policy Coordinator
Health Systems Quality Assurance
Washington State Department of Health
sunrise@doh.wa.gov

**RE: SUNRISE REVIEW — ANESTHESIOLOGIST ASSISTANTS, OPTOMETRISTS, MIDWIVES
SCOPE OF PRACTICE**

Dear Ms. Thomas:

The following is the Health Care Authority's (HCA) response to the Washington State Department of Health's (DOH) Sunrise Review request on anesthesiologist assistants, optometrists, and midwives scopes of practice.

Anesthesiologist assistant scope of practice

We reviewed the bill draft (H-1421.1) and additional materials included in DOH's request. The draft bill would allow licensure of anesthesiologist assistants, non-physician anesthetists who work under the supervision of an anesthesiologist.

Passage of this legislation would have some systems impacts. For example, Washington Apple Health (Medicaid) managed care and fee-for-service plans would need to amend their billing systems to include the additional provider type. The Centers for Medicare and Medicaid Services (CMS) already allows for certified anesthesiologist assistants to bill, so the plans would be able to follow rules under the current Code of Federal Regulations (CFR), thereby reducing some of the burden inherent in making systems changes.

Apple Health plans may also need to adjust pharmacy billing types/taxonomies for medications provided and billed separately from procedures involving anesthesiologist assistants.

HCA would also need to update ProviderOne, Washington's social and health services provider payment system, to include the new provider type.

Additionally, two of our Public Employees Benefits Board (PEBB) Program and School Employees Benefits Board (SEBB) Program plans reported that they did not anticipate that this legislation would have a significant operational impact on them, while two others declined to take a position on the legislation at this time.

This legislation may also impact both Apple Health and PEBB/SEBB clients. Licensing anesthesiologist assistants in our state may lead to wider access and less wait times for medical procedures by filling a current workforce gap. There are only around 1,800 anesthesia providers in Washington State, and providers have stated they cannot always fill their open positions. Filling these positions with anesthesiologist assistants would allow facilities to expand services and be better equipped to respond to emergencies. However, it is also important to note that there are only a handful of schools that provide this training in the United States, and most of them are rather costly. Therefore, this provider type may not be a popular draw for people planning a career in anesthesia.

While licensing anesthesiologist assistants may provide efficiencies, there is little literature demonstrating whether this provider type delivers the same level of care as an anesthesiologist. While 15 states already provide full licensure for anesthesiology assistants, there is not yet enough known to conclude if there is a difference in quality of care.

Optometrist scope of practice

We reviewed the bill draft (S-3085.2) and additional materials included in DOH's request. The draft bill would clarify the definition of optometry and expand optometrists' scope of practice. This draft legislation is likely in response to how the practice of optometry has evolved, now requiring greater education and a higher degree of skill in advanced procedures than the profession once did.

Passage of this legislation would have limited systems effects. Affected Apple Health managed care and fee-for-service plans' payment system codes may need to be updated to allow the optometry taxonomy. These plans' pharmacy systems may also need to be updated to allow for billing of certain drugs prescribed by optometrists (that are not allowed under the provider's current scope of practice). Additionally, while many codes are not limited by taxonomy in ProviderOne, HCA would need to check if any changes were required in that system.

We do not anticipate that our PEBB Program and SEBB Program plans would be significantly affected by this legislation. The procedures identified in the Sunrise Review materials are already covered by these plans, and the plans bill by procedure code — not provider type. While the plans may need to review their contracts to determine if changes are necessary, they do not anticipate significant changes to costs of care.

Although HCA does not regulate scope of practice, we have concerns that these extensions of scope would allow optometrists to perform procedures for which they are potentially not adequately trained. This could lead to a lower level of care quality for our clients utilizing these services.

Midwife scope of practice

We reviewed the bill draft (H-1639.1) and additional materials included in DOH's request. This legislation modernizes gender language and allows limited prescription authority for those with appropriate training. While licensed direct-entry midwives in our state are not currently permitted

to prescribe most contraceptives or infection treatments, their testing and education counseling related to these conditions, medications, and devices are typically within their scope of practice.

If this legislation were to pass, it would have some systems impacts. Apple Health managed care plan contracts may need to be updated, and fee-for-service plan billing guides would also likely need to be updated. However, systems changes would be limited because maternity services are reimbursed as bundled payments rather than individual services. These plans' pharmacy systems may also need to be updated to allow for billing of certain drugs prescribed by midwives (that are not allowed under the provider's current scope of practice). Additionally, HCA would need to check if any changes were required in the ProviderOne system.

While PEBB Program and SEBB Program plans did not foresee any significant operational impacts, two plans requested that ambiguities around training in the current bill draft be addressed. As currently drafted, they do not support the bill. The plans would like to ensure that required training related to the increased scope of practice for midwives ensures patient safety. For example, training should address:

- Implanted contraceptives
- Potential and actual risks, and how to weigh risks and benefits of any treatment
- Human physiology and how treatments can affect other organ systems
- When a patient should be seen by a prescribing medical professional with higher training

This legislation may positively impact clients. Increasing the scope of practice for midwives will likely increase access to some services for clients in rural or marginalized communities. Greater access to care may result in more positive outcomes for childbearing people in our state. Licensed midwives already attend more than 5 percent of total births in Washington State, which is greater than the national average, and this legislation has the potential to increase that percentage.

However, we have the same concerns mentioned by the PEBB Program and SEBB Program plans regarding training and preparation for midwives who, under this legislation, would perform procedures and prescribe medications for which they may not have been trained. Regardless of the potential for increased care access, we want to ensure that licensed midwives caring for our clients have the level of training needed to provide quality care.

Conclusion

HCA recognizes the potential for all three proposals to positively impact access to care for the Washington residents we serve; however, we do have specific concerns about the quality of care that might result from expanding the scope of practice of both optometrists and midwives, when the training requirements for the additional practices are not specifically delineated .

Sunrise Review Response

July 16, 2021

Page 4

Two PEBB/SEBB plans appear to echo those concerns in pointing out the need for more robust training requirements for midwives, and that they could not support the legislation as currently drafted.

If you have any questions about HCA's position on this issue, please contact me at rebecca.podszus@hca.wa.gov.

Sincerely,

Rebecca Podszus
Legislative Review and Analysis Manager
Policy Division

By email

Summary of CAA Educational Programs¹

Case Western Reserve University

Offers its AA program at three locations; Cleveland, Ohio, Washington, D.C., Houston, Texas

[Curriculum overview](#): two-year (six semester –summer/fall/spring) program (MSA)

Total credit hours: 70 - 1st year (basic science/clinically focused didactic courses): 42 and 2nd year (clinical – specialty rotations): 28

Total minimum direct patient care hours: 2,000 - 1st year (basic science/clinical): 560 2nd year (clinical): 1,440

[course list](#):

- **ANES 403. Cardiac Electrophysiology.** 2 Units. In this course students will learn basic and advanced Electrocardiogram interpretation using simulators and electrocardiograms to understand an overview of heart anatomy, function, and neurophysiology.
- **ANES 440. Patient Monitoring and Instrumentation I.** 2 Units. 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. A hands-on laboratory is utilized to maximize direct contact to the instrumentation of the profession.
- **ANES 441. Patient Monitoring and Instrumentation II.** 2 Units. Continuation of ANES 440. Recommended preparation: ANES 440.
- **ANES 456. Applied Physiology for Anesthesiologist Assistants I.** 3 Units. Basic and applied human systems physiology with emphasis on topics and areas of special concern to the anesthetist.
- **ANES 458. Applied Physiology for Anesthesiologist Assistants II.** 3 Units. Continuation of ANES 456. Recommended preparation: ANES 403 and ANES 456.
- **ANES 460. Introduction to Anesthesia.** 2 Units. Introduction to basic concepts dealing with clinical anesthesia. Medical terminology, human anatomy, medical chart interpretation and drug dosage calculations.
- **ANES 461. Orientation to Clinical Experience.** 3 Units. Introduction to experience in the operating room with emphasis on the fundamental procedures and techniques used in administering an anesthetic. Preoperative assessment, IV placement techniques, airway management, intraoperative patient care and postoperative management are all emphasized in

¹ Source: each school's individual webpage.

this course. BLS (basic life support) certification is required for course completion.
Recommended preparation: Acceptance in the M.S.A. program.

- **ANES 462. Anesthesia Clinical Correlation I.** 1 Unit. A series of conferences presented by students that applies to anesthetic theory as it relates to the clinical experience. Specific anesthetic situations are emphasized. Recommended preparation: ANES 460.
- **ANES 463. Anesthesia Clinical Experience I.** 3 Units. A continuation of the preparation, observation, and hands-on learning format initiated in ANES 461. Patient management and technical skills are refined with close attention to the didactic course work. A comprehensive clinical examination is administered at the end of the semester. ACLS (Advanced Cardiac Life Support) certification is required for course completion. Recommended preparation: ANES 461.
- **ANES 464. Anesthesia Clinical Correlation II.** 1 Unit. A spectrum of case presentation conferences presented by the students dealing with basic and major problems in anesthesia management. Medical and surgical history of individual patients and the outcomes of anesthesia and surgery are emphasized. Journal Club and Morbidity and Mortality conferences are included. Recommended preparation: ANES 462.
- **ANES 465. Anesthesia Clinical Experience II.** 4 Units. A continuation of ANES 463. A comprehensive clinical examination is administered at the end of the semester. PALS (Pediatric Advanced Life Support) and ACLS (Advanced Cardiac Life Support) certification is required for course completion. Recommended preparation: ANES 463, BLS Certification, ACLS Certification.
- **ANES 467. Anesthesia Clinical Experience III.** 4 Units. Extended exposure to all of the clinical subspecialties of anesthesiology (obstetrics, pediatrics, neurosurgery, cardiovascular, etc.). Students alternate through rotations at several area hospitals. Recommended preparation: ANES 465, ACLS certification and PALS.
- **ANES 468. Anesthesia Clinical Correlation III.** 1 Unit. The second-year equivalent of ANES 462. Recommended preparation: ANES 464.
- **ANES 469. Anesthesia Clinical Experience IV.** 1 - 10 Units. A continuation of ANES 467. A comprehensive clinical examination is administered at the end of the semester. Recommended preparation: ANES 467.
- **ANES 470. Anesthesia Clinical Correlation IV.** 1 Unit. The second-year equivalent of ANES 464. Recommended preparation: ANES 468.
- **ANES 471. Anesthesia Clinical Experience V.** 1 - 10 Units. A continuation of ANES 469. A comprehensive clinical examination is administered at the end of the semester. Recommended preparation: ANES 469.
- **ANES 475. Pharmacology for Anesthesiologist Assistants I.** 3 Units. Pharmacodynamics, pharmacokinetics, uptake, distribution and action of the volatile and intravenous anesthetics, muscle relaxants, narcotics, hypnotics and other pharmaceuticals used in the administration of an anesthetic. Prereq: Consent of Department.

- **ANES 476. Pharmacology for Anesthesiologist Assistants II.** 3 Units. Continuation of ANES 475. Prereq: ANES 475.
- **ANES 477. Clinical Decision Making in Anesthesia.** 3 Units. An introduction to thinking about clinical situations and 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. Prereq: Consent of department.
- **ANES 478. Clinical Decision Making in Anesthesia II.** 3 Units. Guided and targeted discussion on common anesthetic considerations relegated by co-existing disease, comorbidity, anatomy, surgical procedures and common practice. Prereq: ANES 477.
- **ANES 485. Introduction to Physiological Model-Based Simulation.** 1 Unit. Introduction to physiological model-based simulation using on-screen computer simulation and mannequins. Emphasis is placed on improving appropriate anesthesia-related basic science knowledge, manual skills in anesthesia machine checkout, drug and equipment setup, safety inspections, and performing anesthesia for uncomplicated surgical cases.
- **ANES 486. Physiological Model-Based Simulation I.** 1 Unit. An extension of ANES 485 with emphasis on improving or exercising knowledge of anesthesia-appropriate basic science, the use of more advanced equipment and techniques for uncomplicated surgical cases with an introduction to crisis management. Recommended preparation: ANES 485.
- **ANES 487. Physiological Model-Based Simulation II.** 1 Unit. An extension of ANES 486 emphasizing the physical techniques aspects of crisis management, team work and rescue in anesthesia, including support for and review of training in Basic Life Support and Advanced Cardiac Life Support. Recommended preparation: ANES 486.
- **ANES 488. Anesthesia Non-Technical Skills Lab.** 1 Unit. In this course the student will learn anesthesia non-technical skills, which are used integrally with medical knowledge and clinical techniques. They encompass both interpersonal skills (e.g. communication, team working, leadership) and cognitive skills (e.g. situation awareness, decision making). This course uses modified Crew Resource Management techniques taught in the aviation industry and considers the limitations of human performance and the nature of human error. The goals are to train individuals to avoid, capture and mitigate against the consequences of error. During the course, behaviors shown to minimize errors and maximize patient safety are highlighted and then practiced, with feedback being given to students on their performance.
- **ANES 490. Ethics, Law and Diversity for Anesthesiologist Assistants.** 2 Units. This course will focus on three topics. First, a discussion of legal practice as it applies to health care including basics of medical jurisprudence, negligence, and how to avoid a lawsuit. Second, a discussion of ethical theory including the principles of medical ethics, do not resuscitate, truth telling, and assessment of competence. Last, 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.

- **ANES 499. Clinical Remediation. 1 - 10 Units.** (Credit as arranged.) Course offered to the student one time during the program of study which remediates "C" or below work in a clinical course.
- **ANES 580. Principles of Anesthesia Safety and Science Review I.** 1 Unit. A continuum of online courses over the fall and spring semesters that covers a series of topics in basic medical science with special emphasis in the specialty of anesthesia. Using well-defined virtual platform, the course combines high-quality realistic practice questions, cognitive research, and individualized student testing behaviors to guide learning and increase performance on high stake medical exams. Regularly scheduled examinations throughout the semester are administered.
- **ANES 581. Principles of Anesthesia Safety and Science Review II.** 1 Unit. A continuum of online courses over the fall and spring semesters that covers a series of topics in basic medical science with special emphasis in the specialty of anesthesia. Using a well-defined virtual platform, the course combines high-quality realistic practice questions, cognitive research, and individualized student testing behaviors to guide learning and increase performance on high stake medical exams. Regularly scheduled examinations throughout the semester are administered. Prereq or Coreq: ANES 580.
- **ANES 584. Physiological Model-Based Simulation III.** 1 Unit. An extension of ANES 487 emphasizing the physical techniques and aspects of crisis management, team work, and rescue in anesthesia. Prereq: ANES 487.
- **ANES 585. Physiological Model-Based Simulation IV.** 1 Unit. Extension of ANES 584 emphasizing the physical techniques and aspects of crisis management, team work, and rescue in anesthesia. Prereq: ANES 584.
- **ANES 599. Clinical Remediation.** 1 - 10 Units. (Credit as arranged.) Course offered to the student one time during the program of study which remediates "C" or below work in a clinical course.

Clinical Rotations: varies by program location

- [Cleveland](#) Program
 - UH Rainbow Babies and Children's Hospital
 - Cleveland Clinic
 - Lake Health
 - St. Vincent Charity Medical Center
- [Houston](#) Program
 - Memorial Hermann Regional Hospitals
 - Children's Health

- Baylor Scott & White Health
- Children’s Healthcare of Atlanta
- [Washington, D.C.](#) Program
 - MedStar Georgetown University Hospital
 - George Washington University Hospital
 - University of Utah Hospital
 - The Christ Hospital
 - VA Palo Alto Healthcare System

Admission requirements

- Bachelor’s degree
- Prerequisite courses (time limits but limits are waivable with a high MCAT score)
 - Documentation of each of the prerequisites having been completed with a grade of B- or higher at an accredited U.S. or Canadian institution of higher learning is required. Prerequisites must be taken within five years of the application deadline. For those courses that have been repeated, the highest grade will be used in the calculation. Prerequisites include:
 - one semester of biochemistry
 - one year of biology with laboratory*
 - one semester of human anatomy with laboratory
 - one semester of human physiology
 - one year of chemistry with laboratory*
 - one year of organic chemistry with laboratory*
 - one year of physics with laboratory*
 - one semester of calculus*
 - one semester of advanced statistics (preferably for the life sciences)*
 - one semester of English with expository writing*
 - All academic requirements must be completed satisfactorily before matriculation.
 - Courses marked with an asterisk that were completed with a grade of B- or higher in excess of five years prior to the application deadline will meet the prerequisite criteria only if the MCAT composite score is 500 or higher. A high MCAT score indicates your knowledge of the coursework is still current, and we do not ask that you retake your older coursework.

- MCAT or GRE (taken with 3 years of program application deadline)
- [Altus Suite](#): a two-part online assessment of non-cognitive skills, interpersonal characteristics, and personal values and priorities that the program believes are important for successful students and graduates of their program.

[Tuition \(2021-2022\)](#) total: \$131,656, plus other fees

- 1st year: \$68,003
 - Summer: \$14,733
 - Fall: \$26,635
 - Spring: \$26,635
- 2nd year: \$63,653
 - Summer: \$10,383
 - Fall: \$26,635
 - Spring: \$26,635

[Graduate outcomes](#)

- ~100% job placement for program graduates
- Almost all graduates receive a job offer by commencement
- Graduate starting salary average: \$160,000
- 99% pass rate on certification exams
- Class size (typical)
 - Cleveland: 27
 - Washington, D.C.: 30
 - Houston: 32 (up to 6 seats set aside for Austin-based rotations)
- Program accreditation: Yes. The MSA Program is accredited by the Commission on Accreditation of Allied Health Education Programs and is based on the Standards for Anesthesiologist Assistant Programs.

Emory University

Atlanta, Georgia: The Emory University **Master of Medical Science Program in Anesthesiology** is a concentrated graduate medical education program in the Emory University School of Medicine.

Curriculum overview: Students spend approximately 2500 hours in clinical rotations during the 27-month program.

- **ANES 505 A,B,C.** Human Patient Simulation Lab I,II,III: Basic and advanced monitoring systems. Bench and computer-based instruction and testing of cardiovascular, respiratory, neuro, neuromuscular, and renal physiology and pharmacology. Gowning and gloving; suturing; sterile fields. Includes an entry-level examination on medical terminology, symbols, medical word formation, disease terms, abbreviations, and procedures.
- **ANES 507.** Introduction to Anesthesia Practice: Summer. Credit 6 hours. Introduction to concepts and techniques of general anesthesia, regional anesthesia, and monitored anesthesia care. Includes principles of airway management, anesthesia equipment, monitoring, patient evaluation, pharmacology, and physics.
- **ANES 509.** Anesthesia Practice Seminar. Summer. Credit 1 hour. Weekly small group case discussions, including the concepts and techniques presented in ANES 507. Anesthesia preop consultation and anesthesia records – paper and electronic – are emphasized.
- **ANES 512 A,B.** Principles of Airway Management I, II: Structure, function, pathophysiology, and diseases of the human airway. Basic and advanced principles of elective and emergent airway management, including equipment and techniques.
- **ANES 513.** Anesthesia Delivery Systems and Equipment: Compressed gases, gas distribution systems, anesthesia machines, breathing circuits, anesthesia ventilators, waste-gas scavenging, respiratory care equipment, resuscitation equipment.
- **ANES 516 A,B.** Pharmacology in Anesthesia Practice I, II: Drugs specifically related to the practice of anesthesia, including inhaled anesthetics, narcotics, barbiturates, benzodiazepines, anticholinesterases and anticholinergics, neuromuscular blockers, adrenergic agonists and antagonists.
- **ANES 525.** Anatomy for Anesthesia Practice: Gross anatomy, histology, and medical imaging. Anatomical terms, structures, and relationships emphasizing functional significance and application in clinical anesthesia situations. Laboratory provides demonstrations on models, prosections, and digital media.
- **ANES 530.** Physics for Anesthesia Practice: Physical principles and processes applied to the practice of anesthesia. Dimensional analysis; work, energy, and power; gas laws; fluid mechanics; heat transfer; vaporization; solubility, diffusion, and osmosis; fires and explosions; laser and x-ray radiation; applied electric circuit theory; time constants.

- **ANES 535A,B.** Principles of Monitoring and Instrumentation I, II: Principles, applications, and interpretation of monitoring used in anesthesia practice: electrocardiography; invasive and non-invasive blood pressure; oximetry; cardiac output; hemodynamic calculations; respiratory gases; ventilation; ICP; electroencephalography; temperature; renal function; neuromuscular blockade; ultrasound; echocardiography; point-of-care instrumentation.
- **ANES 536A,B,C.** Anesthesiology Practice I, II, III: History of anesthesia; types of anesthesia; anesthesia care team model; universal precautions and infection control; OR layout and anesthesia setup; AA practice and professionalism; intravenous catheterization; intravenous fluids; arterial cannulation; ASA-standard monitors; induction, maintenance, and emergence from anesthesia.
- Systems-based approach to physiology and pathophysiology in anesthesia practice, including applications and effects of general and regional anesthesia. Emphasizes the integration of preoperative evaluation, planning, and anesthetic management for surgical patients. Includes risk management and critical incidents in anesthesia.
- **ANES 540A,B, C.** Clinical Methods I, II, III: Preoperative patient evaluation, including history taking, physical examination, chart review, and select laboratory, radiologic, and other testing. Basic EKG interpretation.
- **ANES 561A,B,C.** Clinical Anesthesia I, II, III: Foundations of the clinical practice of anesthesia gained through one-on-one supervised instruction in the operating room and other clinical locations.
- **ANES 611A,B,C.** Senior Seminar in Anesthesia I, II, III: Student case presentations. Selected topics in hazards and complications. Literature review. Departmental seminars with visiting professors.
- **ANES 660A,B,C.** Clinical Anesthesia I, II, III: Clinical rotations in anesthesia, including all subspecialty areas; preop clinic; and acute pain service. Students spend approximately 2,000 hours in clinical rotations during the senior year.
- **BAHS 502.** Physiology: Systems approach to normal function of the human body, including relevant information on anatomy. Weekly problem solving sessions, regular laboratory exercises, and clinical application to systemic disorders.
- **BAHS 504.** Pharmacology: Basic principles of drug action; absorption, distribution, metabolism, and excretion of drugs; mechanisms of drug action; and toxicity. Basis for the use of medicines in pharmacologic therapy of specific diseases.

Clinical rotations: Clinical rotations are scheduled in both academic and private practice hospitals - hospitals within the Emory system, hospitals in metropolitan Atlanta, and out-of-town hospitals in Georgia and other states.

- Students spend a minimum of 2500 hours on clinical rotations during their program.
- First-year Clinical Activity: During semesters two through four of the Program, students develop knowledge and skills in fundamentals of anesthesia; patient interviewing and physical

examination; vascular access; basic airway management. Clinical activity is integrated with classroom and simulation lab on a day-to-day basis.

- Senior Clinical Activity: During the senior year (three semesters), clinical is full-time and includes all specialty areas in anesthesia - general surgery, pediatrics, obstetrics and gynecology, otolaryngology, orthopedics, neurosurgery, ophthalmology, genito-urinary surgery, vascular surgery, cardiac surgery, thoracic surgery, transplantation, and trauma. Clinical rotations occur during days, evenings, nights, weekends, and include call. More than 50 clinical rotation sites are available in 14 states and Washington, DC. Senior students attend weekly conferences at their clinical sites.

- [Human Patient Simulation Center](#)

Clinical sites:

- Metro Atlanta sites
 - Atlanta Medical Center
 - Baptist Hospital
 - Children's Healthcare of Atlanta at Egleston
 - Children's Healthcare of Atlanta at Scottish Rite
 - Cobb WellStar Hospital
 - Douglas WellStar Hospital
 - Emory Ambulatory Surgery Center
 - Emory Decatur Hospital
 - Eastside Medical Center
 - Emory Saint Joseph's Hospital
 - Emory Spine Center
 - Emory Surgical Specialties
 - Emory University Hospital Midtown
 - Grady Memorial Hospital
 - Gwinnett Medical Center
 - Kennestone WellStar Hospital
 - Northeast Georgia Medical Center
 - Northside Hospital
 - Piedmont Henry Medical Center

- Piedmont Hospital
- Piedmont Newnan Hospital
- Piedmont Fayette Hospital
- Southern Regional Medical Center
- Out-of-town Rotations (This listing may not reflect all of the clinical sites partnering with the Emory AA program and is subject to change.)
 - Archibold Memorial Medical Center (Thomasville, GA)
 - Athens Regional Medical (Athens, GA)
 - Aurora Healthcare, Inc (Milwaukee, WI)
 - Baptist Health Floyd (New Albany, IN)
 - Baptist Hospital (Jacksonville, FL)
 - Baptist Hospital (Miami, FL)
 - Capital Regional (Tallahassee, FL)
 - Children's National Medical Center (Washington, DC)
 - Children's Medical Center of Dallas (Dallas, TX)
 - Christian Hospital (Saint Louis, MO)
 - Coliseum Medical Center (Macon, GA)
 - Eskenazi Health (Indianapolis, IN)
 - Gunderson Medical Center (La Crosse, WI)
 - Integris Hospital (Oklahoma City, OK)
 - Littleton Adventist Hospital (Denver, CO)
 - MedStar Washington Hospital Center (Washington, DC)
 - Mercy Hospital (St. Louis, MO)
 - Mobile Infirmary (Mobile, AL)
 - Phoebe Putney (Albany, GA)
 - Piedmont Medical Center (Rock Hill, SC)
 - Presbyterian/St. Lukes (Denver, CO)
 - Providence Hospital (Washington, DC)
 - Redmond Regional Hospital (Rome, GA)

- Saint John's Mercy (St. Louis, MO)
- Saint Luke's Hospital (Chesterfield, MO)
- Saint Mary's Hospital (Athens, GA)
- SSM Cardinal Glennon Children's Medical Center (St. Louis, MO)
- St. Francis Hospital (Columbus, GA)
- St. Vincent's Hospital (Jacksonville, FL)
- The Christ Hospital (Cincinnati, OH)
- Tift Regional Medical Center (Tifton, GA)
- UF Shands Hospital (Gainesville, FL)
- University of New Mexico Hospital (Albuquerque, NM)
- University of Wisconsin Hospital (Madison, WI)

[Program faculty/staff](#)

[Admission requirements](#)

- \$160 (non-refundable) application fee
- Bachelor's degree from regionally accredited institution
 - "C" grade or better in prerequisite courses, cumulative 3.1 or higher GPA
 - Minimum 2.8 or better GPA, 3.1 GPA preferred, 3.4 GPA competitive
- Competitive GRE scores (≥ 55 th percentile in each section and ≥ 4.0 in the writing section) **OR** MCAT (472 or better-scoring ≥ 125 in the biological science sections)

[Prerequisites:](#)

- One semester of English
- Two semesters of general biology with laboratory
- Two semesters of general chemistry with laboratory
- One semesters of human anatomy with cadaver or virtual laboratory **OR** two semesters of an anatomy and physiology combined course with laboratory (Emory does not accept vertebrae anatomy)
- One semester of organic chemistry with laboratory
- One semester biochemistry
- Two semesters of general physics

- One semester of calculus
- Either the Medical College Admissions Test (MCAT) or the Graduate Records Admission Test Examination (GRE)
- Onsite Interview at the Anesthesiology Assistant Program in Atlanta, GA (Invitation Only)
- Courses strongly preferred, but not required
- General Physics labs
- One semester of human physiology
- One semester of statistics
- One semester of cellular biology
- One semester of molecular biology
- One semester of organic chemistry II

Shadowing: applicants arrange to shadow an anesthetist or anesthesiologist in an operating room observing the administration of anesthesia and other human patient care activities. Applicants must submit a [document](#) related to the experience as part of their application.

Interviews (mandatory)

Tuition: Average indebtedness for the Class of 2020 is \$155,252.

| | |
|---|-------------------|
| Tuition | \$17,767/semester |
| Emory Student Fees | \$1,201/semester |
| Estimated Costs | N/A |
| Books & supplies | \$6,958/program* |
| Moderate Living expenses | \$20,700/year* |
| Permit Parking and Clinical travel | \$2,100* |
| EU Student Health Insurance (full coverage required) | \$3,816/year |

Program outcomes (2018-2020)

- 94.4% National Certifying Exam first-time pass rate
- 98.1% National Certifying Exam first-year pass rate
- 99% job placement
- 3.7% student attrition rate
- [2017 matriculation statistics](#) (most recent on website): 585 applicants began the admissions process, the Emory AA Program received approximately 218 verified in CASAA and 168 complete applications; 100 candidates were invited to interview; 36 accepted; 36 expected to matriculate in June 2018.

- [Program accreditation](#): Yes. The Master of Medical Science Program in Anesthesiology is a clinical educational program for the health profession, Anesthesiologist Assistant. The Program is accredited by Commission on Accreditation of Allied Health Education Programs.

[Indiana University School of Medicine](#)

Indianapolis, IN: Indiana University School of Medicine offers a **Master of Science degree in Anesthesia** as part of an Anesthesiologist Assistant Program. This program is a 28-month didactic curriculum that prepares learners for certification as Anesthesiologist Assistants.

Curriculum overview*: Curriculum for this program includes 28 months of intensive didactic sessions complemented by clinical rotations through a variety of subspecialties, including pediatrics, trauma, orthopedics, regional anesthesia, neuro and OB. The program, including classroom, laboratory and clinical requirements, prepares students for the certification examination offered by the National Commission for the Certification of Anesthesiologist Assistants. At the successful conclusion of the program, students are awarded a Master of Science degree in Anesthesia.

Clinical training: This graduate program offers access to world-class clinical facilities and simulation laboratories and is housed within one of the top academic health care centers in the midwest. The IU School of Medicine Anesthesiologist Assistant Program is housed on the IU School of Medicine—Indianapolis campus, which is within walking-distance to IU Health University Hospital, Riley Hospital for Children at IU Health, Eskenazi Hospital and IU Health Methodist Hospital.

[Faculty/staff](#)

[Admission requirements](#)

- Baccalaureate degree: from a regionally accredited institution in the United States or Canada. No absolute minimum applies, but the following results are considered competitive for admission to this program: An overall GPA of 3.52 or greater, Science GPA of 3.56 and Pre-requisite GPA of 3.58.
- Citizenship: permanent resident visa at time of application or U.S. citizenship
- Standardized tests, no minimum score requirement
 - MCAT, competitive score: minimum total score of 499 (49th percentile) or
 - GRE, competitive score: minimum score of 152 (55th percentile) in Verbal Reasoning and a minimum score of 154 (55th percentile) in Quantitative Reasoning
- Clinical anesthesia shadowing: Applicants must complete at least eight hours of shadowing with either a Physician Anesthesiologist (MD or DO), Anesthesiologist Resident, Certified Anesthesiologist Assistant (CAA) or a Certified Registered Nurse Anesthetist (CRNA) who practices in the Anesthesia Care Team Model. The shadowing experience must be documented on the [Anesthesia Shadowing Verification Form](#), or a similar form that captures the same information.

- Letter of evaluation: Letters of Evaluation must be submitted by faculty, advisors, school administrators, employers or other individuals who can comment on the applicant's ability and personal character as relates to the pursuit of a career as an anesthesiologist assistant. Of the three required letters, one must be from a professor or instructor who can evaluate the applicant's academic ability. Letters from family or friends will not be accepted.
- [Technical requirements](#): observation; communication; motor; intellectual-conceptual, integrative and quantitative abilities; behavioral and social attributes
- Pre-requisites: Pre-requisite requirements should be completed with a B- or better within 10 years of matriculation to this program. Survey courses are not accepted. AP credit is accepted for pre-requisite coursework. Online courses are evaluated on a case-by-case basis.

| Course | Number of Semesters | Note |
|----------------------------|---------------------|--|
| Biology | 2 | Microbiology, Cell & Molecular Biology and Biochemistry may be substituted for this requirement. |
| Human Anatomy | 1 | |
| Human Physiology | 1 | A two-semester combined Anatomy and Physiology course is accepted. |
| Chemistry with Lab | 2 | |
| Organic Chemistry with Lab | 2 | |
| Physics with Lab | 2 | |
| Statistics | 1 | Biostatistics may be substituted for this requirement. Introductory/100-level statistics classes are accepted. |

Program Averages

| | Class of 2019 | Class of 2020 | Class of 2021 | Class of 2022 |
|-------------|---------------|---------------|---------------|---------------|
| Overall GPA | 3.48 | 3.59 | 3.55 | 3.58 |
| Science GPA | 3.5 | 3.43 | 3.45 | 3.49 |
| Pre-req GPA | 3.55 | 3.5 | 3.42 | 3.52 |

| | Class of 2019 | Class of 2020 | Class of 2021 | Class of 2022 |
|------------------------------|------------------|------------------|------------------|------------------|
| GRE - Verbal (Percentage) | 60 | 61 | 62 | 62 |
| GRE - Quant (Percentage) | 68 | 60 | 55 | 62 |
| MCAT (Raw Score) | 498 | 496 | 499 | 498 |

Tuition:

- In-state: \$13,252.67/semester, plus other costs/fees
- Non-resident: \$16,666.67/semester, plus other costs/fees

Program outcomes

| Matriculation & Retention | | | | M & R |
|---------------------------|--------------------|-----------|----------------------|-------|
| Cohort | Initial Enrollment | Separated | Voluntary Withdrawal | Rate |
| 2022 | 16 | - | - | 100% |
| 2021 | 12 | - | - | 100% |
| 2020 | 12 | - | - | 100% |
| 2019 | 12 | 1 | 0 | 92% |

| Certification Exam Results | | | | 1st Pass | Total Pass |
|----------------------------|-----------|------------------|------------|----------|------------|
| Cohort | Examinees | 1st Attempt Pass | Total Pass | Rate | Rate |
| 2020 | 12 | 12 | 12 | 100% | 100% |
| 2019 | 11 | 10 | 11 | 91% | 100% |

| Job Placement | | | Placement |
|---------------|-----------|----------|-----------|
| Cohort | Graduated | Employed | Rate |
| 2020 | 12 | 12 | 100% |
| 2019 | 11 | 11 | 100% |

Class size: 16 students

Program accreditation: Yes. The Anesthesiologist Assistant Program is accredited by the Commission on Accreditation of Allied Health Education Programs upon the recommendation of the Accreditation Review Committee for the Anesthesiologist Assistants (ARC-AA). Contact the Commission for questions about the accreditation status of the program.

Nova Southeastern University

Offers its AA program at three locations; Fort Lauderdale, Tampa, and Jacksonville, Florida

Dual admission program: allows students to earn a Bachelor's degree and Master of Science in Anesthesia (MSA) in four years and 27 months.

MSA Curriculum overview – 114 total credits didactic and 2,000 hours clinical

Semester I

- **ANES 5048: Medical Terminology.** This is a self-study, online course. Use of medical language for appropriate and accurate communication in patient care. Course includes terminology and symbols, word formation, body systems and disease terms, abbreviations, and procedures. 1 credit
- **ANES 5081: Introduction to Clinical Anesthesia.** Prepares and educates the student to work within the anesthesia care team. Introduction to induction, maintenance, and emergence from anesthesia. Includes history of anesthesia, types of anesthesia, universal precautions and infection control, layout of the operating room, sterile fields and techniques, interacting with patients, starting intravenous catheters and arterial cannulae, obtaining arterial blood samples, and application of ASA-standard monitors. Students will use an anesthesia simulator to gain the basic knowledge and usage of monitors. 2 credits
- **ANES 5301: Anesthesia Laboratory I.** A state-of-the-art laboratory and anesthesia simulator will prepare the student for the usage and complete understanding of the monitors and practice of anesthesia. Students will apply their didactic knowledge to scenarios on the anesthesia simulator. Patient modalities—such as pulse oximetry, capnography, and blood pressure monitoring systems—are explored. Laboratory experiments will develop students' understanding of anesthesia delivery systems, various types of breathing circuits, fresh gas flow effect, theory of dilutional methods of cardiac output monitoring, and relations between mean circulatory filling pressures and central venous pressure. A vascular sonography lab will allow a unique and comprehensive understanding of transesophageal and transthoracic echocardiography, cerebrovascular testing, and venous and peripheral arterial testing. 3 credits
- **ANES 5328: ECG for Anesthesiologist Assistants.** This course presents a comprehensive approach to perioperative emergency and advanced cardiac life support, including monitoring, interpretation, and management of pathologic conditions affecting the circulatory and pulmonary systems. Relevant anatomy, physiology, neurophysiology, pharmacology, and medical equipment will be included. Emphasis is placed on rhythm strip analysis and evidenced-based perioperative applications. 2 credits
- **PHS 5400: Physiology.** Clinically relevant physiologic principles of the major organ systems covered in Anatomy. Pathological changes that occur in the human physiology in the disease process. 4 credits

- **ANA 5420: Anatomy.** Gross structures of the human body. Integrates topographic and radiographic anatomy to stress the application and importance of clinical anatomy. Develops the knowledge of the human anatomy necessary for the practice of the profession. 4 credits
- **ANES 5621: Principle of Airway Management I.** This course will provide an opportunity to learn and appreciate structure, function, pathophysiology, disease, and management of the human airway. The basic and advanced principles of elective and emergent airway management, including equipment and techniques, will be covered. Examination, recognition, techniques, and management involved in pediatric and adult difficult airways will be discussed. Course will correlate with laboratory work for a better understanding and use of bag/ mask ventilation, oral and nasal airways, oral and nasal intubation techniques, lightwands, fiberoptic intubations, double lumen tubes, surgical airways, and application of laryngeal mask airway. 2 credits
- **Total:** 18 credits

Semester II

- **ANES 5302: Anesthesia Laboratory II.** This course is a continuation of ANES 5301. A state-of-the-art laboratory and anesthesia simulator will prepare the student for the usage and complete understanding of the monitors and practice of anesthesia. Students will apply their didactic knowledge to scenarios on the anesthesia simulator. Patient modalities—such as pulse oximetry, capnography, and blood pressure monitoring systems—are explored. Laboratory experiments will develop students' understanding of anesthesia delivery systems, various types of breathing circuits, fresh gas flow effect, theory of dilutional methods of cardiac output monitoring, and 206 College of Health Care Sciences—Department of Anesthesia relations between mean circulatory filling pressures and central venous pressure. A vascular sonography lab will allow a unique and comprehensive understanding of transesophageal and transthoracic echocardiography, cerebrovascular testing, and venous and peripheral arterial testing. 3 credits
- **ANES 5462: Pharmacology for Anesthesia I.** Emphasizes drugs specifically related to the practice of anesthesia, including inhaled anesthetics, opioids, barbiturates, benzodiazepines, anticholinesterases and anticholinergics, neuromuscular blockers, adrenergic agonists and antagonists, nonsteroidal antiinflammatory drugs, antidysrhythmics, calcium channel blockers, diuretics, anticoagulants, antihistamines, and antimicrobials. 2 credits
- **ANES 5601: Applied Physiology for Anesthesia Practice I.** Pathophysiology in a systems approach—cardiovascular, pulmonary, renal, neuro, metabolic, and endocrine. Emphasizing hemodynamics, Starling forces, pulmonary responses, renal hemodynamics, temperature regulation, blood gases/pH, and maternal and fetal physiology. Also emphasizes those systems that affect evaluation and planning for anesthesia and that are affected by the administration of anesthesia. 3 credits
- **ANES 5622: Principle of Airway Management II.** This course is a continuation of ANES 5621. This course will provide an opportunity to learn and appreciate structure, function, pathophysiology, disease, and management of the human airway. The basic and advanced principles of elective and emergent airway management, including equipment and techniques, will be covered. Examination, recognition, techniques, and management involved in pediatric and adult difficult

airways will be discussed. Course will correlate with laboratory work for a better understanding and use of bag/mask ventilation, oral and nasal airways, oral and nasal intubation techniques, lightwands, fiberoptic intubations, double lumen tubes, surgical airways, and application of laryngeal mask airway. 2 credits

- **ANES 5801: Instrumentation and Monitoring.** Practical principles, application, and interpretation of various monitoring modalities including ECG, invasive and noninvasive blood pressure, oximetry, cardiac output, respiratory gas analysis, respiration, and instrumentation as they pertain to anesthesia practice. Also includes intraoperative neurophysiology monitoring, temperature, renal function, coagulation/hemostasis, neuromuscular junction, transesophageal and transthoracic echocardiography, cerebrovascular testing, and venous and peripheral arterial testing. 2 credits
- **ANES 5901: Anesthesia Principle and Practices I.** Principles involved in the formulation of anesthetic plans based upon data obtained during the preoperative evaluation. Includes the formulation and practices of different anesthetic plans and techniques as related to specific surgical procedures and pathophysiology. 2 credits
- **ANES 5104: Principles of Life Support*.** This course provides for the certification of Advanced Cardiac Life Support (ACLS) and Pediatric Advanced Life Support (PALS). It will focus on the assessment and management of adults, children, and infants in cardiopulmonary crisis. ACLS and PALS certification will be obtained during this semester. 3 credits
- **MHS 5205: Writing for Medical Publication.** 3 credits
- **Total:** 20 credits
- * Basic Life Support Certification and Advanced Cardiac Lifesaving will be obtained during this semester

Semester III

- **ANES 5001: Clinical Anesthesia I.** Developmental skills and foundations of the clinical practice of anesthesia are gained through one-on-one supervised instruction in the operating room and other ancillary anesthetizing locations. Participation and responsibilities increase through the year as knowledge and skills develop. 3 credits
- **ANES 5303: Anesthesia Laboratory III.** This course is a continuation of ANES 5302. A state-of-the-art laboratory and anesthesia simulator will prepare the student for the usage and complete understanding of the monitors and practice of anesthesia. Students will apply their didactic knowledge to scenarios on the anesthesia simulator. Patient modalities—such as pulse oximetry, capnography, and blood pressure monitoring systems—are explored. Laboratory experiments will develop students' understanding of anesthesia delivery systems, various types of breathing circuits, fresh gas flow effect, theory of dilutional methods of cardiac output monitoring, and relations between mean circulatory filling pressures and central venous pressure. A vascular sonography lab will allow a unique and comprehensive understanding of transesophageal and transthoracic echocardiography, cerebrovascular testing, and venous and peripheral arterial testing. 3 credit

- **ANES 5463: Pharmacology for Anesthesia II.** This course is a continuation of ANES 5462. Emphasizes drugs specifically related to the practice of anesthesia, including inhaled anesthetics, opioids, barbiturates, benzodiazepines, anticholinesterases and anticholinergics, neuromuscular blockers, adrenergic agonists and antagonists, nonsteroidal anti-inflammatory drugs, antidysrhythmics, calcium channel blockers, diuretics, anticoagulants, antihistamines, and antimicrobials. 2 credits
- **ANES 5602: Applied Physiology for Anesthesia Practice II.** This course is a continuation of ANES 5601. Pathophysiology in a systems approach—cardiovascular, pulmonary, renal, neuro, metabolic, and endocrine. Emphasizing hemodynamics, Starling forces, pulmonary responses, renal hemodynamics, temperature regulation, blood gases/pH, and maternal and fetal physiology. Also emphasizes those systems that affect evaluation and planning for anesthesia and that are affected by the administration of anesthesia. 3 credits
- **ANES 5802: Instrumentation and Monitoring II.** This course is a continuation of ANES 5801. Practical principles, application, and interpretation of various monitoring modalities, including ECG, invasive blood pressure, oximetry, cardiac output, respiratory gas analysis, respiration, and instrumentation, as they pertain to anesthesia practice will be discussed. The course also includes intraoperative neurophysiology monitoring, temperature, renal function, coagulation/hemostasis, neuromuscular junction, transesophageal and transthoracic echocardiography, cerebrovascular testing, and venous and peripheral arterial testing. 2 credits
- **ANES 5902: Anesthesia Principle and Practices II.** This course is a continuation of ANES 5901. Principles involved in the formulation of anesthetic plans based upon data obtained during the preoperative evaluation. Includes the formulation and practices of different anesthetic plans and techniques as related to specific surgical procedures and pathophysiology. 2 credits
- **ANES 5101: Student Lecture Series I.** This course provides the opportunity for students to explore a special topic of interest under the direction of a faculty member. Arrangements are made directly with the appropriate faculty member and the program director. Topic exploration is governed by the needs of the program and the educational goal of the student. Possible topics involve clinical and nonclinical aspects of the practice of medicine in the United States. 1 credit
- **Total:** 16 credits
- **Minimum clinical experience:** 150 hours (anesthesia rotations in hospital)

Semester IV

- **ANES 5000: Professional Issues in Anesthesiologist Assistant Practice.** This course examines the current professional and ethical issues that exist within the health care industry associated with the practice of anesthesia and patient care. Course topics include beneficence, non-maleficence, and respect for autonomy, as well as political and legal issues contained in closed claims examinations and current issues regarding anesthesiologist assistant practice. 2 credits
- **ANES 5002: Clinical Anesthesia II.** This course is a continuation of ANES 5001. Developmental skills and foundations of the clinical practice of anesthesia are gained through one-on-one supervised instruction in the operating room and other ancillary anesthetizing locations.

Participation and responsibilities increase through the year as knowledge and skills develop. 3 credits

- **ANES 5304: Anesthesia Laboratory IV.** This course is a continuation of ANES 5303. A state-of-the-art laboratory and anesthesia simulator will prepare the student for the usage and complete understanding of the monitors and practice of anesthesia. Students will apply their didactic knowledge to scenarios on the anesthesia simulator. Patient modalities—such as pulse oximetry, capnography, and blood pressure monitoring systems—are explored. Laboratory experiments will develop students' understanding of anesthesia delivery systems, various types of breathing circuits, fresh gas flow effect, theory of dilutional methods of cardiac output monitoring, and relations between mean circulatory filling pressures and central venous pressure. A vascular sonography lab will allow a unique and comprehensive understanding of transesophageal and transthoracic echocardiography, cerebrovascular testing, and venous and peripheral arterial testing. 3 credits
- **ANES 5903: Anesthesia Principle and Practices III.** This course is a continuation of ANES 5901. It discusses the principles involved in the formulation of anesthetic plans based upon data obtained during the preoperative evaluation and includes the formulation and practices of different anesthetic plans and techniques as related to specific surgical procedures and pathophysiology. 2 credits
- **ANES 5102: Student Lecture Series II.** This course is a continuation of ANES 5101. 1 credit
- **ANES 5107: Internship.** The student will complete 80 hours of internship in an area of interest within a healthcare organization outside of their regular places of employment. The final product of this internship is an in-depth SWOT analysis of the unit or healthcare organization. The internship site requires prior MHSc faculty approval. 5 credits
- **ANES 5603: Applied Physiology for Anesthesia Practice III.** The course is a continuation of ANES 5602. Pathophysiology in a systems approach—cardiovascular, pulmonary, renal, metabolic, and endocrine will be covered. Special emphasis will be applied to those systems that affect evaluation and planning for anesthesia and that are affected by administration of anesthesia. 2 credits
- **Total:** 18
- **Minimum clinical experience:** 144 hours (anesthesia rotations in hospital)
- **Pediatric Advanced Cardiac Lifesaving will be obtained during this semester.**

Semester V

- **ANES 6001: Clinical Anesthesia III.** Encompasses the student's clinical experience in required rotations through all sub-specialty areas of anesthesia. Clinical rotations are assigned in two-week and four-week intervals and will require being on-call during some nights and weekends. Clinical practice of anesthesia is gained through one-on-one supervised instruction in the operating room and other ancillary anesthetizing locations. Monthly required readings are

assigned. Monthly comprehensive examinations are administered. Each course's grade is composed of clinical evaluations and comprehensive examination scores. 13 credits

- **Total:** 13 credits
- **Minimum clinical experience:** 675 hours (anesthesia rotations in hospital)

Semester VI

- **ANES 6002: Clinical Anesthesia IV.** This course is a continuation of ANES 6001. Encompasses the student's clinical experience in required rotations through all sub-specialty areas of anesthesia. Clinical rotations are assigned in two-week and four-week intervals and will require being on-call during some nights and weekends. Clinical practice of anesthesia is gained through one-on-one supervised instruction in the operating room and other ancillary anesthetizing locations. Monthly required readings are assigned. Monthly comprehensive examinations are administered. Each course's grade is composed of clinical evaluations and comprehensive examination scores. 15 credits
- **ANES 6110: Anesthesia Review.** Lectures, required readings, and discussions with faculty members, visiting faculty members, and current residents on clinical and research topics. Includes correlation of case management and complications. 2 credits
- **Total:** 17 credits
- **Minimum clinical experience:** 675 hours (anesthesia rotations in hospital)

Semester VII

- **ANES 6003: Clinical Anesthesia V.** This course is a continuation of ANES 6002. Encompasses the student's clinical experience in required rotations through all sub-specialty areas of anesthesia. Clinical rotations are assigned in two-week and four-week intervals and will require being on-call during some nights and weekends. Clinical practice of anesthesia is gained through one-on-one supervised instruction in the operating room and other ancillary anesthetizing locations. Monthly required readings are assigned. Monthly comprehensive examinations are administered. Each course's grade is composed of clinical evaluations and comprehensive examination scores. 12 credits
- **Total:** 12 credits
- **Minimum clinical experience:** 356 hours (anesthesia rotations in hospital)

Admission requirements

- Bachelor's degree from a nationally recognized and regionally accredited college or university.
- Prerequisites: a "C" or better is required in all prerequisite classes. In order to meet prerequisite requirements, math and science courses must include sufficient rigor and detail in the discipline (Introductory, survey, or business courses will not satisfy the requirements).
 - Required and cannot be survey courses

- English - 3 semester hours
- General Biology with Lab or Anatomy and Physiology with Lab - 8 semester hours
- General Chemistry with Lab - 8 semester hours
- Organic Chemistry with Lab - 4 semester hours
- Biochemistry - 3 semester hours
- General Physics with Lab - 8 semester hours
- Calculus - 3 semester hours
- Preferred but not required
 - Cell & Molecular Biology - 3 semester hours
 - Organic Chemistry - 4 semester hours
 - Microbiology - 3 semester hours
 - Physiology - 3 semester hours
 - Anatomy with lab - 4 semester hours
- Official transcripts of all undergraduate and graduate coursework: Applicants must have a minimum cumulative GPA of 2.75 on a 4.0 grading scale. A minimum GPA of 3.2 is preferred.
- GRE or MCAT taken with last five years
- Three letters of recommendation
- [Summary of an article](#) published in a current anesthesia journal
- At least eight hours of documented [anesthesia exposure by observation](#) in the operating room.

Tuition: amount not found on website

Program outcomes

- \$153, 850 average A.A. starting salary per 2019 NSU study
- 100% A.A. graduates from NSU graduates pass their A.A. certification exam on the first attempt (source: four consecutive years of graduating classes and 7 of 8 past consecutive years of graduating classes)
- Tampa program
 - National Credentialing Examination Performance: 100%
 - Job Placement: 100%
 - Retention: 90.91%
 - Attrition: 9.09%

- Fort Lauderdale program
 - National Credentialing Examination Performance: 99.10%
 - Job Placement: 100%
 - Attrition: 9.50%

Accreditation: Nova Southeastern University, Dr. Pallavi Patel College of Health Care Sciences, Master of Science in Anesthesia program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP).

[South University](#)

Offers its AA program at two locations; Savannah, Georgia, and Palm Beach, Florida

Curriculum overview: Master of Medical Science in Anesthesia Science, 169 credits total

Quarter I: 18 Credits, 34 hours clinical experience

- ANS5001 Clinical Anesthesia I, 1 Credit Hour
- ANS5020 Medical Terminology, 1 Credit Hour
- ANS5081 Principles of Airway Management I, 2 Credit Hours
- ANS5100 Physics of Anesthesia, 2 Credit Hours
- ANS5120 Introduction to Anesthesia Delivery Systems & Equipment, 2 Credit Hours
- ANS5160 Introduction to Clinical Anesthesia, 3 Credit Hours
- ANS5181 Anesthesia Laboratory I, 1 Credit Hour
- ANS5191 Anesthesia Simulation I, 1 Credit Hour
- ANS5931 Anatomy & Physiology I, 4 Credit Hours
- ANS5941 Anatomy & Physiology Lab I, 1 Credit Hour
- Basic life support certification will be accomplished during Quarter I

Quarter II: 20 Credits, 120 hours clinical experience

- ANS5012 Clinical Anesthesia II, 4 Credit Hours
- ANS5182 Anesthesia Laboratory II, 1 Credit Hour
- ANS5192 Anesthesia Simulation II, 1 Credit Hour
- ANS5221 Principles of Instrumentation and Patient Monitoring I, 2 Credit Hours
- ANS5345 Anesthesia Principles and Practice I, 3 Credit Hours

- ANS5932 Anatomy & Physiology II, 4 Credit Hours
- ANS5942 Anatomy & Physiology Lab II, 1 Credit Hour
- PHA5001 General Pharmacology I, 4 Credit Hours

Quarter III: 20 Credits, 150 hours clinical experience

- ANS5013 Clinical Anesthesia III, 5 Credit Hours
- ANS5183 Anesthesia Laboratory III, 1 Credit Hour
- ANS5193 Anesthesia Simulation III, 1 Credit Hour
- ANS5201 Cardiovascular Physiology for Anesthesia Practice I, 2 Credit Hours
- ANS5222 Principles of Instrumentation and Patient Monitoring II, 2 Credit Hours
- ANS5346 Anesthesia Principles and Practice II, 3 Credit Hours
- ANS5421 Pharmacology in Anesthesia Practice I, 2 Credit Hours
- PHA5002 General Pharmacology II, 4 Credit Hours

Quarter IV: 20 Credits, 170 hours clinical experience

- ANS5014 Clinical Anesthesia IV, 5 Credit Hours
- ANS5184 Anesthesia Laboratory IV, 1 Credit Hour
- ANS5194 Anesthesia Simulation IV, 1 Credit Hour
- ANS5202 Cardiovascular Physiology for Anesthesia Practice II, 3 Credit Hours
- ANS5300 Pulmonary Physiology for Anesthesia Practice, 2 Credit Hours
- ANS5347 Anesthesia Principles and Practice III, 3 Credit Hours
- ANS5422 Pharmacology in Anesthesia Practice II, 2 Credit Hours
- ANS5510 AA Professional Seminar, 1 Credit Hour
- ANS5601 Regional Anesthesia Practice I, 2 Credit Hours

Quarter V: 20 Credits, 180 hours clinical experience

- ANS5015 Clinical Anesthesia V, 6 Credit Hours
- ANS5140 Pre-anesthetic Evaluation, 3 Credit Hours
- ANS5302 Pulmonary Physiology for Anesthesia Practice II, 2 Credit Hours
- ANS5348 Anesthesia Principles and Practice IV, 3 Credit Hours
- ANS5502 Advanced Anesthesia Systems and Monitoring, 2 Credit Hours

- ANS5520 Advanced Airway Management, 2 Credit Hours
- ANS5602 Regional Anesthesia Practice II, 2 Credit Hours
- Advanced Cardiac Life Support and PALS certification will be obtained during this quarter.

Note(s): A Comprehensive Examination covering the material from the first five quarters will be administered to determine the preparedness of each student to advance to senior clinical year. Failure to successfully master the exam will result in remediation and necessary extension of the student's program by at least one Quarter.

Quarter VI: 18 Credits, 480 hours clinical experience

- ANS6011 Clinical Anesthesia I, 16 Credit Hours
- ANS6021 Senior Seminar I, 1 Credit Hour
- ANS6041 Anesthesia Review I, 1 Credit Hour

Quarter VII: 18 Credits, 495 hours clinical experience

- ANS6012 Clinical Anesthesia II, 16 Credit Hours
- ANS6022 Senior Seminar II, 1 Credit Hour
- ANS6042 Anesthesia Review II, 1 Credit Hour

Quarter VIII: 17 Credits, 480 hours clinical experience

- ANS6013 Clinical Anesthesia III, 15 Credit Hours
- ANS6023 Senior Seminar III, 1 Credit Hour
- ANS6043 Anesthesia Review III, 1 Credit Hour

Quarter IX: 18 Credits, 480 hours clinical experience

- ANS6014 Clinical Anesthesia IV, 16 Credit Hours
- ANS6024 Senior Seminar IV, 1 Credit Hour
- ANS6044 Anesthesia Review IV, 1 Credit Hour

Admission requirements

- Baccalaureate degree from a regionally accredited university.
- Required prerequisite courses are listed in the following table. Excluding English, the most advanced pre-requisite coursework in each subject area must have been completed within seven years of application date. Pre-requisite coursework subject areas: Biology, Chemistry, Biochemistry, Physics, and Math.
- Official transcripts of all undergraduate and graduate course work.

- Entrance Exams
 - Graduate Record Examination (GRE) or Medical College Admission Test or taken within 5 years prior to the completion of the application.
 - Graduate Record Examination (GRE). The program must receive official score reports directly from the Educational Testing Service. The Code for South University is 7450.
 - Medical College Admission Test scores may be submitted for consideration if completed within five years of the application. The applicant may submit official MCAT scores through CASAA.

The South University Anesthesiologist Assistant Program accepts credit for Advanced Placement courses. AP courses taken and successfully completed will be counted as one course credit toward completion of the respective pre-requisite subject. Grades earned in AP courses are not used in the calculation of the applicant's overall or pre-requisite GPA.

- Verification of familiarity with the practice of anesthesia, including the environment in which day-to-day work occurs. The required form is located on the admissions page of the South University Anesthesiologist Assistant program website.
- Three letters of recommendation are required to be submitted as part of the CASAA application. Recommended sources of reference include: employers/managers, professors, advisors, or research directors.
- CASAA applicant personal statement.
- As the admissions process also takes into consideration the personality characteristics deemed essential to becoming an anesthesiologist assistant, material such as a noncognitive or personality assessment may be required. Students wishing to enter the Anesthesiologist Assistant program in the College of Health Professions should be aware that applicants with a prior felony or serious misdemeanor conviction will not be considered. Acceptance into a South University program or its completion does not imply or guarantee that a student will be able to obtain subsequent licensure or certification.
- Required Pre-requisite College Courses (substitutions are not permitted and survey courses or courses for non-science majors are not acceptable)
 - REQUIRED
 - ENGLISH (3 SEMESTER HOURS OR 4-5 QUARTER HOURS)
 - GENERAL BIOLOGY (200 OR HIGHER LEVEL BIOLOGY COURSES WILL ALSO FULFILL THIS REQUIREMENT); LABS PREFERRED BUT NOT REQUIRED) (6 SEMESTER HOURS OR 9 QUARTER HOURS)
 - GENERAL CHEMISTRY (FULL ACADEMIC YEAR) LABS ARE REQUIRED (6 SEMESTER HOURS OR 9 QUARTER HOURS)

- ORGANIC CHEMISTRY (SOPHOMORE 200 LEVEL) LABS ARE REQUIRED (3 SEMESTER HOURS OR 4-5 QUARTER HOURS)
- BIOCHEMISTRY (JUNIOR 300 LEVEL); LABS PREFERRED BUT NOT REQUIRED (3 SEMESTER HOURS OR 4-5 QUARTER HOURS)
- GENERAL PHYSICS (FULL ACADEMIC YEAR); (SOPHOMORE 200 LEVEL) LABS ARE REQUIRED (6 SEMESTER HOURS OR 9 QUARTER HOURS)
- CALCULUS (3 SEMESTER HOURS OR 4-5 QUARTER HOURS)
- STATISTICS (MATH OR STATISTICS DEPARTMENT COURSES) (3 SEMESTER HOURS OR 4-5 QUARTER HOURS)
- PREFERRED (NOT REQUIRED)
 - CELL AND MOLECULAR BIOLOGY, ANATOMY, AND PHYSIOLOGY (3 SEMESTER HOURS OR 4-5 QUARTER HOURS)
 - FULL YEAR OF ORGANIC CHEMISTRY TRIGONOMETRY OR CALCULUS BASED PHYSICS (6 SEMESTER HOURS OR 9 QUARTER HOURS)

Technical Standards: To undertake and successfully complete the Anesthesiologist Assistant program, as well as to function as an anesthetist after graduation, requires that an individual meet certain fundamental physical, cognitive, and behavioral standards. The requisite technical skills include, but are not limited to the following:

- Effectively communicating verbally with patients and their family members and with other healthcare professionals.
- Interacting with patients, including obtaining a history and performing a physical examination.
- Effectively communicating in writing, and by record keeping, those data and information essential to the practice of anesthesia and the care of patients.
- Reading and comprehending written parts of the medical record and other patient care documents in order to safely and effectively participate in the practice of anesthesia.
- Having sufficient knowledge, motor skill, and coordination to perform diagnostic and therapeutic tasks, including invasive procedures, on patients in a timely manner so as to insure the safety and well-being of the patients. These tasks include but are not limited to peripheral and central venous catheterization, arterial puncture and cannulation, breathing bag-and-mask ventilation, laryngeal mask airway insertion and management, endotracheal intubation.
- Having sufficient strength, motor skill, and coordination to lift, move, and position patients as required for administration of anesthesia and performance of cardiopulmonary resuscitation.
- Having sufficient speed and coordination to quickly and safely react to emergent conditions throughout the hospital in order to assure patient safety.

- Recognizing and differentiating colors of signals displayed on monitors; being able to work in both light and dark conditions as exist in patient care areas (e.g., operating room, radiology suite, endoscopy suite); being able to recognize details of objects both near and far.
- Hearing, processing, and interpreting multiple conversations, monitor signals, alarms, and patient sounds simultaneously in fast-paced patient care settings (e.g., operating room, intensive care unit, emergency room).
- Having no impairment that would preclude continuous performance of all of the above activities or any and all of the other activities that are an integral part of an anesthesiologist assistant's participation in the anesthesia care team.

Applicant Selection: The South University Anesthesiologist Assistant Program receives a large number of applications each year, and each application is reviewed by a member of the Admissions Committee. Due to the volume of applications received, the program has standardized the evaluation process to be both comprehensive and fair. To determine which candidates are selected for admission, the Admissions Committee has established the following selection factors as components of determining admission into the South University Anesthesiologist Assistant Program. Applicants for admission are considered and ranked using multiple factors as described below:

- Academic achievement (overall GPA, prerequisite GPA, and science GPA)
- Entrance Exam Scores. Preference will be given to those with GRE scores (Quantitative and Verbal Reasoning) > 50th percentile and MCAT scores > 500
- Prerequisite coursework obtained from a four-year college or university designed for science majors
- Letters of reference
- Direct patient care experience
- Personal statement/essay
- Anesthesia/shadowing experiences
- Community service/volunteer activities
- Interview performance
- Results of noncognitive/personality assessment
- Evidence of an applicant's interpersonal skills, problem-solving ability, professionalism, motivation, academic potential, communication, and knowledge of the AA profession/health care system are assessed by the Admissions Committee. The committee will determine the degree to which applicants demonstrate alignment with the South University AA Program mission and expectations.
- Tuition: not stated on website
- Program outcomes

- [Savannah](#):
 - 98.6% program graduation rate for 2017, 2018, and 2019 classes
 - 100% NCCAA certifying exam pass rate for 2017, 2018, and 2019 classes
 - 100% employment rate for program graduates in the 2017, 2018, and 2019 classes
- [West Palm Beach](#): not stated

Accreditation: The Anesthesia Science program at South University is accredited by the Commission on Accreditation of Allied Health Education Programs.

- The West Palm Beach program appears to be in the process of accreditation.

[University of Missouri-Kansas City \(UMKC\)](#)

The **Master of Science in Anesthesia** program at the UMKC School of Medicine prepares students to become anesthesiologist assistants (AAs). The program mission is to graduate AAs with advanced specialized knowledge and skills and individuals who are compassionate, competent, ethical and patient-centered AAs who work within an Anesthesia Care Team.

Curriculum overview: To complete the program students must complete a 7 semester plan of study, which involves 112 credit hours of coursework, and at least 2000 clinical hours (obtained during Anesthesia Clinical Experience courses). The minimum patient case requirements are outlined in the student handbook. Students must also maintain a 3.0 or better grade point average to earn the Master of Science in Anesthesia degree.

Semester 1 (January to May) (16.5 credit hours)

- ANESTH 5505 Anatomy for Anesthesiologist Assistants I (1)
- ANESTH 5518 Professionalism for the Anesthesiologist Asst I (.5)
- ANESTH 5540 Patient Monitoring and Instrumentation (3)
- ANESTH 5556 Physiology for Anesthesiologist Assistants I (3)
- ANESTH 5560 Introduction to Anesthesia (2)
- ANESTH 5561 Orientation to Simulation and Clinical Application (5)
- ANESTH 5575 Pharmacology for Anesthesiologist Assistants I (2)

Semester 2 (May to August) (13.5 credit hours)

- ANESTH 5528 Professionalism for the Anesthesiologist Asst II (0.5)
- ANESTH 5541 Methods of Anesthesia I (2)
- ANESTH 5557 Physiology for Anesthesiologist Assistants II (2)
- ANESTH 5558 Anesthesia & Co-existing Disease I (2)
- ANESTH 5563 Anesthesia Clinical Experience I (4)
- ANESTH 5576 Pharmacology for Anesthesiologist Assistants II (1)

- ANESTH 5585 Physiological Model-based Simulation I (2)

Semester 3 (August to December) (17.5 credit hours)

- ANESTH 5506 Anatomy for Anesthesiologist Assistants II 1
- ANESTH 5538 Professionalism for the Anesthesiologist Asst III 0.5
- ANESTH 5559 Anesthesia & Co-existing Disease II 2
- ANESTH 5565 Anesthesia Clinical Experience II 8
- ANESTH 5577 Methods of Anesthesia II 3
- ANESTH 5578 Pharmacology for Anesthesiologist Assistants III 1
- ANESTH 5586 Physiological Model-based Simulation II 2

Semester 4 (January to May) (17 credit hours)

- ANESTH 5564 Anesthesia Clinical Correlation II (1)
- ANESTH 5567 Anesthesia Clinical Experience III (16)

Semester 5 (May to August) (13 credit hours)

- ANESTH 5568 Anesthesia Clinical Correlation III (1)
- ANESTH 5569 Anesthesia Clinical Experience IV (12)

Semester 6 (August to December) (17 credit hours)

- ANESTH 5570 Anesthesia Clinical Correlation IV (1)
- ANESTH 5571 Anesthesia Clinical Experience V (16)

Semester 7 (January to May) (16.5 credit hours)

- ANESTH 5573 Anesthesia Clinical Experience VI (16)
- ANESTH 5548 Anesthesiologist Assistant Senior Seminar (0.5)

Medical College of Wisconsin

Milwaukee

Curriculum overview: Master of Science in Anesthesia

Semester 1 (August – December, 19 credits)

- ANE 501 - Foundations in Clinical Science (6.5 credits)
 Course Description: Foundations in Clinical Science incorporates all the relevant anatomy, physiology and pharmacology concepts required for more advanced coursework in applied anesthesia. Coursework includes a thorough review of cellular and organ system physiology, introduction to pharmacology (-kinetics, -dynamics, -genomics, and signal transduction), and anatomy of the upper respiratory tract.
 Summary: This coursework covers normal human anatomy and physiology pertinent to anesthesia practice as well as basic knowledge of pharmacology.

- ANE 502 - Foundations in Clinical Practice (1.5 credits)
 Course Description: Foundations in Clinical Practice provides students with an overview of healthcare system elements necessary for the treatment of patients and the conduct of anesthesia care. Topics include patient and provider safety, common laboratory and diagnostic studies in healthcare, medical documentation, and infection control issues.
 Summary: Here, students are introduced to the healthcare environment through lectures and lab exercises. The course is designed to familiarize students with common care practices in anesthesia and healthcare.
- ANE 503 - Foundations in Anesthesia (1.5 credits)
 Course Description: Foundations in Anesthesia provides the learner with an introduction to anesthesia concepts. Beginning with an overview of the physiology of pain and the response to surgical stress, the course informs on the various anesthesia techniques employed to anesthetize the surgical patient. Therapeutic targets are discussed along with the practical aspects of intravenous fluid therapy and blood transfusions.
 Summary: Now information becomes more specific to anesthesia. Students will learn basic practices and principles in anesthesia care including foundations in general anesthesia, regional anesthesia, monitored anesthesia care, volume management, and pharmacology.
- ANE 511 - Physics and Delivery Systems for Anesthesia (3 credits)
 Course Description: Physics and Delivery Systems for Anesthesia reviews relevant physical principles involved in the delivery of anesthesia and in the care of surgical patient. Additionally, this course instructs on the mechanical, electrical, and pneumatic components of anesthesia monitoring and delivery systems. Applications to practice such as pre-use safety checks are included.
 Summary: Physics and Delivery systems covers relevant physical principles applied in both physiology and anesthesia technology. On top of that, the anesthesia machine and ventilators are discussed in depth as well as an introduction to patient monitors. Coursework is combined between lectures, laboratory, and small group sessions.
- ANE 521 - Patient Assessment I: Approach to the Healthy Patient (1 credit)
 Course Description: Patient Assessment I prepares the student to perform a preoperative interview including a focused preoperative medical history and physical exam. Students will practice interviewing skills and performing cardiac, pulmonary, and airway exams. Application of findings and appropriate use of expert consultants are discussed. Since this course draws heavily upon foundational anatomy and physiology knowledge, satisfactory participation of ANE 501 is required.
 Summary: Students will learn the how to conduct a proper and thorough preoperative exam as they would perform in the hospital. Using both lectures and patient actors for knowledge and skill training, students will be prepared to interview and examine their patients.
- ANE 531 - Planning and Preparation I : Approach to the Healthy Patient (2.5 credits)

Course Description: Planning and Preparation I is designed to prepare students for care of the healthy surgical patient while focusing on the knowledge and skills necessary to formulate, organize, prepare, and implement an anesthetic plan. An emphasis is placed on anesthesia mechanical ventilators and basic, non-invasive monitoring modalities which comply with the American Society of Anesthesiologists STANDARDS FOR BASIC ANESTHETIC MONITORING. Summary: Patient monitoring technology is a main focus in this course while also including preparation of drugs, airway devices, and other tools needed to be fully prepared to manage an average anesthetic.

- ANE 541 - Implementation and Management I: General Anesthesia and Sedation (1.5 credits)
Course Description: Implementation and Management I is designed to develop anesthesia knowledge sufficient to adequately perform a basic, yet complete anesthetic on a healthy patient for non-complicated surgical procedures of limited invasiveness. Course material is designed to integrate with a student's existing understanding of physiology, patient assessment, and physiologic monitoring. Anesthesia pharmacology, practical skills, detection and management of common intraoperative pathological conditions, and postoperative complications are included.
Summary: Students learn the sequence and practice of anesthetic events common to non-complicated surgical procedures. Patient assessment, pharmacology, and perioperative management specific to a basic anesthetic will be integrated into the lecture topics.
- ANE 551 - Anesthesia Simulation I: The General Anesthetic and MAC (1 credit)
Course Description: In Anesthesia Simulation 1, learners will develop and apply real-time monitoring and decision-making skills necessary for supervised clinical education. The learner will apply foundational concepts in practice using high-fidelity simulation, task trainers, and intraoperative equipment. Airway skills, intraoperative diagnostic laboratory analysis, and physiologic monitoring will be incorporated into the course activities to create a foundational knowledge of monitored anesthesia care and general anesthesia.
Summary: This hands-on course is designed to develop skills and apply concepts learned in concurrent lecture series. In a simulated OR setting and in small group exercises, students will learn foundational skills and knowledge of performing a basic anesthetic.
- ANE 561 - Professionalism I: Introduction to Professional Behavior, Medical Ethics, and Value-based Care (0.5 credits)
Course Description: Professionalism I prepares the student for participation in supervised clinical education by providing a foundation in the ethical, legal, cultural, and professional issues involved in modern anesthesia care.
Summary: The first Professionalism course instills ideas of proper behavior and integrity in the anesthesia profession to ensure students are ready to begin clinical training.

Semester 2 (January – June, 23 credits)

- ANE 522 - Patient Assessment II: Approach to the Patient with Comorbidities (2 credits)
Course Description: Patient Assessment II is a continuation of Patient Assessment I. This course furthers the student's understanding and ability to perform preoperative assessments on

patients with both simple and complex medical conditions ranging from mild to severe. Pathophysiology and common pharmacotherapy are presented including perioperative implications. Application of findings to anesthesia planning and appropriate use of expert consultants are discussed.

Summary: Now that students have learned how to interview and examine the average patient, in this course they will learn how to interview and examine patients with various diseases and conditions. Learning will include with both lectures and patient actors to develop skills.

- ANE 532 - Planning and Preparation II: Approach to the Patient with Comorbidities (2 credits)
Course Description: Planning and Preparation II is a continuation of ANE 531. This course focuses on the equipment and techniques necessary for advanced anesthesia practice. The application of monitoring data in the detection and management of circulatory and neurologic dysfunction, special monitoring situations, and difficult airway management are thoroughly discussed. Preparation of equipment and coordination of personnel and resources are also included.
Summary: More advanced anesthesia and medical technologies are discussed in the course as well as the disease states and surgeries they might be used in. Management and interpretation of complex patients, advanced monitors, and complex surgeries is also included.
- ANE 542 - Implementation and Management II: Care for the Complex Patient undergoing Surgical Care (10 credits)
Course Description: Implementation and Management II is continuation of ANE 541. The course focuses on the anesthetic implications and key intraoperative management issues related to surgery and associated patient coexisting diseases. Course activities will provide the learner with the requisite knowledge to adequately manage anesthetics for a wide range of surgical interventions.
Summary: As a step-up from the management of a healthy patient, in this course students will learn how to manage more unhealthy patients and more complicated surgeries.
- ANE 552 - Anesthesia Simulation II: Managing the Patient with Comorbidities (2 credits)
Course Description: Anesthesia Simulation II is a continuation of ANE 551. In this course, learners will develop and apply advanced, real-time monitoring and decision-making skills necessary for advanced supervised clinical education. The learner will apply foundational and advanced concepts in practice using high-fidelity simulation, task trainers, and intraoperative equipment. Advanced airway skills, intraoperative diagnostic laboratory analysis, and advanced physiologic monitoring will be incorporated into the course activities to support a wide variety of simulated comorbidities and perioperative complications.
Summary: It is time to learn to handle an unhealthier patient and more difficult procedures. This hands-on course employs small group exercises and OR simulation for patients that present with various or multiple disease states. Complex surgeries and complex patients are now managed by students.
- ANE 562: Professionalism II: Organizations and Evidence-Based Practice (0.5 credits)
Course Description: This course includes two aims: 1) The course provides an overview of the various professional organizations which support anesthesiologist assistant practice including

opportunities for support and participation and 2) The importance of incorporating best-practices into the development of routines and regimens commonly employed in the perioperative setting. The course includes a project-based activity designed to further the learners understanding of advocacy, service, and research in anesthesia.

Summary: Utilizing lectures, students learn the function and importance of organizations that support the profession. In a project, students will evaluate and understand literature in anesthesia care and the importance of continuous education to maintain safe practice throughout their careers.

- ANE 571 - Clinical Anesthesia I (approx. 400 hours) (6.5 credits)
Course Description: In Clinical Anesthesia 1, learners will and apply real-time monitoring and decision-making skills in supervised clinical education. The learner will apply foundational concepts in practice within the perioperative setting. Airway skills, intraoperative diagnostic laboratory analysis, and physiologic monitoring will be incorporated for use during supervised patient care in monitored anesthesia care and general anesthesia.
Summary: Students will now work with real patients in real operating rooms receiving real anesthesia. Using the skills and knowledge obtained from the first semester, students will be expected to apply those items to care of real patients under supervision of licensed anesthesia providers.

Semester 3 (July – December, 15.5 credits)

- ANE 581 - Subspecialty Practice: Introduction to Patient Assessment and Planning for Special Populations (3 credits)
Course Description: Subspecialty Practice provides learner with foundational knowledge relevant to subspecialty practice, but may also be encountered in general supervised clinical learning including pediatric preoperative assessment, care of the gravid patient for non-obstetric procedures, and post-anesthesia care unit care. A review of the various knowledge components needed to manage anesthesia crisis is also included.
Summary: So students have learned about healthy patients and unhealthy patients but what about different specialty patients? In this course, learning centers around groups such as pediatrics, pregnant patients, post-operative care, as well as managing patients in a life-threatening state.
- ANE 553 - Anesthesia Simulation III: Advanced Techniques and Crisis Management (1.5 credits)
Course Description: Anesthesia Simulation III is a continuation of ANE 552 and is divided into three areas of skill development: Crisis Management, Invasive Hemodynamic Monitoring, and Regional Anesthesia. Crisis management will involve learners the management of life-threatening crisis in anesthesia care including anaphylaxis, malignant hyperthermia, pulmonary embolism, tension pneumothorax, perioperative myocardial infarction, massive hemorrhage, and cardiac arrhythmias. During the invasive hemodynamic monitoring portion of the course, learners will practice and demonstrate insertion of central venous and pulmonary artery catheters. The regional anesthesia area will provide learners an opportunity to practice and demonstrate common regional anesthesia techniques including intravenous regional anesthesia, neuraxial anesthesia and peripheral nerve blocks.

Summary: What role does anesthesia play when a patient has a life-threatening critical event in the OR? In this hands-on course, students will be placed in those situations in an OR simulator and learn to recognize and respond to them. Also, this course allows students to develop skills with the placement of invasive monitors and regional techniques.

- ANE 563 - Professionalism III: Practice Management, Professional Issues, and Compensation (1.5 credits)

Course Description: This course introduces the learner to the tenets of systems-based practice as defined by the ACGME for Anesthesiology, practice management issues of facing today's anesthesia providers, and professional issues that will aid in the transition from trainee to licensed provider. Topics include aligning personal career goals with the goals of potential employer organizations, how to conduct an effective job search, and the basics for understanding the compensation and benefits commonly available to anesthesiologist assistants.

Summary: Life after anesthesia school is something students need to be prepared for. Learning will include discussing the transition to a full practitioner as well as ways to make students good candidates and what to look for in a good employer.

- ANE 572 - Clinical Anesthesia II (approx. 400 hours) (9.5 credits)

Course Description: Clinical Anesthesia II is a continuation of ANE 571. In this course, learners will develop and apply advanced, real-time monitoring and decision-making skills necessary during supervised clinical education. Introduction to advanced airway skills, continuation of intraoperative diagnostic laboratory analysis, and exposure to advanced physiologic monitoring will be incorporated into clinical learning.

Summary: Students continue to grow in aptitude and knowledge within the OR environment. Students increase skills in airway management as well as in understanding, treating, and recognizing physiological changes in their patients.

Semester 4-5 (January – December, 42.5 credits)

- ANE 661 - Professionalism IV: Quality Improvement in Anesthesia (1 credit)

Course Description: This course introduces the learner to career development strategies. Topics include participation in career development activities and maturation into mentoring, supporting, and educating anesthesiologist assistant students. Furthermore, learners will foster goals and strategies to promote the profession and how to become future leaders in the anesthesiologist assistant community.

Summary: The final stages of development into a truly dedicated anesthesiologist assistant occur here. Learners develop the ideals to become true professionals and future teachers and leaders as their education nears completion.

- ANE 671 - Clinical Anesthesia III (approx. 940 hours) (23 credits)

Course Description: Clinical Anesthesia within the final year of training involves more sub-specialty training. Specialty rotations include pediatric, obstetric, cardiac, thoracic, trauma, and neuro anesthesia. General rotations are also involved in this course. Learners will develop autonomy and ability in anesthesia practice with the goal to become a competent and safe provider in all areas of anesthesia practice and surgical procedures.

Summary: This is a course that transitions students into clinical providers. Mastery of basic anesthesia skills and familiarity and proficiency in various areas of advanced anesthesia practice are developed and implemented.

- ANE 672 - Clinical Anesthesia IV (approx. 760 hours) (16.5 credits)
Course Description: Clinical Anesthesia within the final year of training involves more sub-specialty training. Specialty rotations include pediatric, obstetric, cardiac, thoracic, trauma, and neuro anesthesia. General rotations are also involved in this course. Learners will develop autonomy and ability in anesthesia practice with the goal to become a competent and safe provider in all areas of anesthesia practice and surgical procedures.
Summary: This is a course that transitions students into clinical providers. Mastery of basic anesthesia skills and familiarity and proficiency in various areas of advanced anesthesia practice are developed and implemented.
- ANE 681 - Seminar in Reflective Practice (1 credit)
Course Description: Research has demonstrated that reflective practice is an effective means to foster improved performance and quality outcomes. This course will provide learners with the structure and framework to critically evaluate their own performance in anesthesia care, identify learning needs, establish action plans for improvement, and monitor their progress.
Summary: During advanced clinical training in semesters 4 and 5, often the greatest evaluators of student strength and weakness are the students themselves. This course is designed for students to reflect on their development and address areas of weakness to be a well-rounded and competent anesthetist upon graduation.
- ANE 682 - Seminar in Reflective Practice (1 credit)
Course Description: Research has demonstrated that reflective practice is an effective means to foster improved performance and quality outcomes. This course will provide learners with the structure and framework to critically evaluate their own performance in anesthesia care, identify learning needs, establish action plans for improvement, and monitor their progress.
Summary: During advanced clinical training in semesters 4 and 5, often the greatest evaluators of student strength and weakness are the students themselves. This course is designed for students to reflect on their development and address areas of weakness to be a well-rounded and competent anesthetist upon graduation.

Simulation

Current clinical affiliations:

- [St. Agnes Hospital](#)
- [ThedaCare Regional Medical Center Appleton](#)
- [ThedaCare Regional Medical Center Neenah](#)
- [Methodist Hospitals](#)
- [Columbia St. Mary's](#)
- [Nicklaus Children's Hospital](#)
- [Children's National Health System](#)
- [Froedtert Hospital](#)

- [Froedtert Menomonee Falls Hospital](#)
- [Children's Wisconsin](#)
- [Clement J. Zablocki VA Medical Center](#)
- [Aurora Sinai Medical Center](#)
- [Aurora Grafton Medical Center](#)
- [Gundersen Lutheran](#)
- [UW Hospitals and Clinics](#)

[Admission requirements](#)

Minimum Eligibility Requirements

- **Bachelor's Degree:** In order to apply to the program, applicants must have a bachelor's degree from a college or university located in the United States or Canada that is accredited by an organization recognized by the Council for Higher Education Accreditation (CHEA).
- **GPA:** Applicants must earn a minimum cumulative GPA of 2.75 or meet the requirements of the Recent Academic Achievement Pathway. (GPAs include all coursework attempted without grade replacement or grade forgiveness for any repeated courses.)
- **Test Scores:** The Medical College of Wisconsin Master of Science in Anesthesia program does not require the GRE or MCAT exam for submission of application. Applicants who wish to voluntarily submit exam scores may do so by selecting our program's GRE code (7150). For the MCAT, select Medical College of Wisconsin (no code needed).
- **Letters of Recommendation:** (3) from individuals who are familiar with your suitability for graduate study leading into a career in anesthesia clinical practice.
- **Clinical Anesthesia Shadowing Experience:** At least 8 hours of anesthesia shadowing is required. The activity must demonstrate sufficient anesthesia focus by involving an Anesthesiologist, Certified Anesthesiologist Assistant, or Nurse Anesthetist. The shadowing experience must be documented on the Verification of Exposure to Anesthesia Practice Form (PDF) or on any similar form that appropriately confirms the shadowing experience.
- **Physical and Technical Standards:** Meet all physical and technical standards as listed in the Physical and Technical Standards for the Anesthesiologist Assistant Student Guide (PDF).
- **Prerequisites** listed below must be completed with a grade of C or better with official transcripts received by the program prior to the program start date. Applications will still be considered with coursework pending, but transcripts showing successful completion of all prerequisites must be received at least three weeks prior to the program start date for a student to remain eligible to begin the program. College credit for high school Advanced Placement courses do not satisfy the requirement. Students with AP credit in a prerequisite course may substitute a similar course that is equal to, or higher than, the pre-requisite course. For example, a student with AP credit in Calculus I could substitute Calculus II or Statistics I. For questions regarding appropriate alternative coursework, contact the MSA program (MCWMSA@mcw.edu).
 - Biochemistry: One semester
 - Human Anatomy*: One semester
 - Courses with lab are recommended but not required
 - Human Physiology*: One semester
 - Courses with lab are recommended but not required

- Advanced Mathematics: One semester
 - Calculus I or Statistics I (Courses designed for health professions or research applications will be accepted provided significant computation is included. Theoretical or conceptual application only is not sufficient.)
 - Biology I with Lab: One semester
 - Biology II with Lab: One semester
 - The following courses may be substituted for this requirement: Microbiology, Cell & Molecular Biology, Neurobiology, Genetics
 - Chemistry I with Lab: One semester
 - Chemistry II with Lab: One semester
 - The following courses may be substituted for this requirement: Biochemistry II, Organic Chemistry II)
 - Organic Chemistry with Lab: One semester
 - Physics I with Lab: One semester
 - Physics II with Lab: One semester
 - Medical Terminology: One course
- *Combined Anatomy/Physiology courses will be accepted; minimum two semesters required.

Tuition (2021-2022): \$135,366.30

- First year total tuition and fees: \$53,969.70
- Second year total tuition and fees: \$54,264.40
- Third year total tuition and fees: \$27,132.20

Program outcomes

- Class of 2020 Outcomes
 - 86% retention rate
 - 100% national exam pass rate (all attempts)
 - 100% positive job placement

| | 3 Year Average | Graduation Year | | |
|-----------------------------------|----------------|-----------------|------|------|
| | | 2018 | 2017 | 2016 |
| Enrolled | 15 | 14 | 15 | 12 |
| Graduated | 95.1% | 12 | 15 | 12 |
| First-time Certification Pass | 92.3% | 9 | 15 | 12 |
| Certification Pass (all attempts) | 100% | 12 | 15 | 12 |
| Positive Job Placement | 100% | 12 | 15 | 12 |

Accreditation: The Medical College of Wisconsin is accredited by the Higher Learning Commission and CAAHEP.

University of Colorado in Denver

Colorado

[Curriculum overview](#): 118 credits

Semester 1 Fall (19 credit hours)

- Introduction to Clinical Anesthesia (2 credit hours)
- MSA-1 Seminar I (1 credit hours)
- Anesthesia Monitoring & Delivery Systems (4 credit hours)
- Applied Neurophysiology (2 credit hours)
- Principles of Airway Management (2 credit hours)
- Orientation to Anesthesia (1 credit hour)
- Simulation and Skills Lab I (1 credit hour)
- Clinical Anesthesiology I (OR Experience) (5 credit hours)
- Anesthesia Non-Technical Skills & Wellness I (1 credit hour)

Semester 2 Spring (22 credit hours)

- Anesthesia Principles and Practice I (2 credit hours)
- Cardiovascular Physiology (2 credit hours)
- Patient Monitoring II (2 credit hours)
- Pharmacology I (2 credit hours)
- Simulation and Skills Lab II (1 credit hour)
- Clinical Anesthesiology II (5 credit hours)
- Renal, Fluid & Electrolyte Physiology (2 credit hours)
- Fundamentals of Anatomy and Physiology for Anesthetists (4 credit hours)
- MSA-1 Seminar II (1 credit hour)
- Anesthesia Non-Technical Skills & Wellness II (1 credit hour)

Semester 3 Summer (21.5 credit hours)

- Anesthesia Principles and Practice II (2 credit hours)
- Respiratory Physiology (2 credit hours)

- Perioperative Medicine (2 credit hours)
- Pharmacology II (2 credit hours)
- Anesthesia & Co-Existing Diseases I (2 credit hours)
- Simulation and Skills Lab III (1 credit hour)
- Clinical Anesthesiology III (7.5 credit hours)
- Applied Clinical Anatomy and Physiology for Anesthetists (2 credit hours)
- MSA-1 Seminar III (1 credit hour)

Semester 4 Fall (16.5 credit hours)

- Anesthesia Principles and Practice III (2 credit hours)
- Hepatic and Maternal-Fetal Physiology (2 credit hours)
- Pharmacology III (2 credit hours)
- Anesthesia & Co-Existing Diseases II (2 credit hours)
- Clinical Anesthesiology IV (7.5 credit hours)
- MSA-1 Seminar IV (1 credit hour)

Semester 5 Spring (13 credit hours)

- Senior Seminar I (2 credit hours)
- Senior Project I (1 credit hour)
- Clinical Anesthesiology V (10 credit hours)

Semester 6 Summer (13 credit hours)

- Senior Seminar II (2 credit hours)
- Senior Project II (1 credit hour)
- Clinical Anesthesiology VI (10 credit hours)

Semester 7 Fall (13 credit hours)

- Senior Seminar III (2 credit hours)
- Senior Project III (1 credit hour)
- Clinical Anesthesiology VII (10 credit hours)

[Admission requirements](#)

- Bachelor's degree from an accredited institution

- Prerequisite coursework: Documentation that each of the prerequisites listed below has been completed, with a grade of B-minus (2.7) or higher. Substitutions are NOT permitted, and survey courses for non-science majors are NOT acceptable. For those courses that have been repeated, the highest grade will be recognized. We accept courses taken at a four year institution, community college or online as long as they are from an accredited institution. We **do not** accept home lab kits as part of any course that requires lab.
- The prerequisites must be completed within 7 years of the application deadline; however, if a student takes the MCAT and receives a score of 25 or higher (or above the 45th Percentile on the new MCAT) and has been clinically active in a health profession since completing your prerequisites, the 7 year requirement for prerequisites will be waived. (Call or email the office to confirm.)
 - **English:** 1 semester (7 year window DOES NOT APPLY)
 - **General Biology with Lab:** 2 semesters total
 - General Biology I with lab (1 semester)
 - General Biology II with lab (1 semester)
 - **General Chemistry with Lab:** 2 semesters total
 - General Chemistry I with lab (1 semester)
 - General Chemistry II with lab (1 semester)
 - **Organic Chemistry with Lab:** 2 semesters total
 - Organic Chemistry I with lab (1 semester)
 - Organic Chemistry II with lab (1 semester)
 - **General Physics with Lab:** 2 semesters total (trigonometry or calculus based is preferred)
 - General Physics I with lab (1 semester)
 - General Physics II with lab (1 semester)
 - **Biochemistry:** 1 semester
 - **Calculus:** 1 semester
 - **Statistics:** 1 semester
 - **Human Anatomy and Physiology:** 1 semester of combined A&P or 1 semester each of Human Anatomy and Human Physiology (Courses in vertebrate embryology and developmental anatomy or mammalian physiology and embryology will NOT satisfy this requirement.)
 - **Cellular and Molecular Biology:** Preferred, but not required

Advanced placement credit for prerequisite coursework that appear in official transcripts **may** be considered based on courses, scores, and student's overall undergraduate performance.

- Test scores: Medical College Admission Test (MCAT) scores from within five years of the application cycle year. The applicant must have MCAT score reports sent to CASAA. A Score of 25 or higher on the MCAT will be considered competitive using the pre-2015 version. Scores in the 45th percentile or higher on the new MCAT2015 Exam will be considered competitive for current test-takers. The GRE will NOT be accepted in place of the MCAT.
- Shadowing experience: Applicants to the program must be familiar with the practice of anesthesia, including related activities in the operating room. Individuals applying to the

program must spend at least 8 hours with an anesthetist or an anesthesiologist in an operating room environment observing the conduct of anesthesia. Applicants who meet the minimum requirement will be considered for admission, but additional hours are strongly suggested. The applicant is encouraged to visit a local hospital and ask to speak with the anesthesiologist who directs the department of anesthesia.

The Documentation of Familiarity with Anesthesia Form must be submitted as part of the application to verify the number of hours that the applicant has spent in the OR.

- Altus Suite - Admissions Assessments of Non-Cognitive Skills: All applicants applying to the Anesthesiologist Assistant Program, at The University of Colorado are required to complete an online suite of assessments (Altus Suite), to assist with our selection process for the 2021-2022 Application Cycle.
 - Altus Suite consists of a two part online assessment of non-cognitive skills, interpersonal characteristics, and personal values and priorities that we believe are important for successful students and graduates of our program. Altus Suite will complement the other tools that we use for applicant screening. In implementing Altus Suite, we are trying to further enhance fairness and objectivity in our selection process.
 - Altus Suite consists of:
 - Casper: a 60-90 minute online situational judgment test (SJT)
 - Snapshot: a 10-minute one-way interview with standardized questions

Tuition

- Colorado Resident: \$705 per credit hour (x 118 credit hours = \$83,190), plus other costs
- Non-Resident: \$1,032 per credit hour (x 118 credit hours = \$121,776), plus other costs

[Clinical rotation locations:](#)

- Aurora Health Care, Milwaukee WI
- Boulder Community Health, Boulder CO
- Penrose St. Francis Hospital, Colorado Springs CO
- Childrens Hospital Colorado, Aurora CO
- Christian Northeast Hospital, St Louis MO
- Gunderson Health System, La Crosse WI
- Mercy Hospital, St. Louis MO
- Mountain View Regional Medical Centre, Las Cruces NM

- Mobile Infirmary Medical Center, Mobile AL
- USAP Presbyterian St. Lukes, Denver CO
- USAP Swedish Medical Center, Denver CO
- St. John Ascension, Tulsa OK
- St Joseph Hospital, Denver CO
- University of Colorado Hospital, Aurora CO
- University of New Mexico Hospital, Albuquerque NM
- University of Wisconsin Hospitals, Madison WI
- Vidant Medical Center, Greenville NC

Accreditation: Accredited by the Higher Learning Commission. Not clear if this is program-specific.

Program outcomes

NCCAA Exam

| Class | Graduated | Pass | Fail |
|-----------|-----------|------|------|
| 2021 | | | |
| 2020 | 12 | 12 | 0 |
| 2019 | 12 | 12 | 0 |
| 2018 | 11 | 11 | 0 |
| 2017 | 10 | 10 | 0 |
| 2016 | 7 | 7 | 0 |
| 2015 | 6 | 6 | 0 |
| Total | 46 | 46 | 0 |
| Pass Rate | | 100% | |

Employment

| Class | Graduated | Employed |
|------------|-----------|----------|
| 2021 | | |
| 2020 | 12 | 12 |
| 2019 | 12 | 12 |
| 2018 | 11 | 11 |
| 2017 | 10 | 10 |
| 2016 | 7 | 7 |
| 2015 | 6 | 6 |
| Total | 46 | 46 |
| Employment | | 100% |

Student Attrition

| Class | Initial Enrollment | Voluntary Withdrawal | Separated |
|-----------|--------------------|----------------------|-----------|
| 2021 | 14 | 1 | |
| 2020 | 13 | 1 | 0 |
| 2019 | 14 | 0 | 2 |
| 2018 | 13 | 2 | 0 |
| 2017 | 13 | 3 | 0 |
| 2016 | 10 | 3 | 0 |
| 2015 | 7 | 1 | 0 |
| Total | 70 | 10 | 2 |
| Attrition | | 14.28% | 2.8% |