Anesthesiologist assistants:

Making the operating room more accessible and manageable

by Al Rothstein, Atlanta, GA

In the early 1990s in Cobb County, GA, the Atlanta suburb of Marietta was experiencing explosive growth. And at Wellstar-Kennestone Hospital, the growing pains were starting to show.

"The volume of patients was skyrocketing," recalls Steven Oweida, MD, FACS, a vascular surgeon at Kennestone. "The increase in patients, combined with a shortage of anesthesia providers, was straining the system, especially when it came to anesthesia delivery. The hospital had been exclusively using anesthesiologists, until it became clear that it needed to look at physician extenders to offer a more efficient level of care that met the hospital's standards."

Even today, surgeons can sometimes be at the mercy of the anesthesia provider shortage. As the number of operations and sites where they are performed increase, it is critical for surgeons to be able to perform when and where they choose without being hampered by a lack of anesthesia providers. Operating rooms can temporarily shut down. If they don't, sometimes tired, overworked anesthesia providers are forced to be on the case.

Anesthesiologist assistants (AAs) allow the surgeons more access to the operating room and less guessing as to when they are doing the surgery.

This is why AAs are becoming the solution of choice for both the shortage and quality issues. For example, today there are 22 anesthesiologists, 18 AAs, and one certified registered nurse anesthetist (CRNA) on staff at Kennestone. The cardiac team has four anesthesiologists and six AAs.

Dr. Oweida says, “You can either throw bodies at the problem, or you can use the best anesthesia provider available. Now they are giving us the right AA and the right anesthesiologist. We receive a better work ethic and results from the AAs than even from the marginal anesthesiologists we once had to work with because of the shortage. We have noticed that our patients are getting a better level of care.”

The change Kennestone has experienced is not unusual for the growing AA profession. AAs are helping to solve the anesthesia provider shortage as their numbers are increasing.

“It expands the flexibility and versatility of the anesthesia department,” says Terrence Fullum, MD, FACS, chairman of the department of surgery at Providence Hospital in Washington, DC. “Certainly in this era of anesthesia shortages, that is one of the areas we have evaluated and used.”

“I immediately realized the AA’s strong adjunct to the anesthesiologist, with their ability to start lines, work the magic of induction, and so on,” according to Dr. Fullum, who performs advanced laparoscopic and bariatric surgery. “The AAs know the protocols and are great at patient assessments. This enhances the anesthesiologist’s ability to safely supervise more than one case at a time.”

In most states, AAs are supervised by anesthesiologists in the same manner as CRNAs: one anesthesiologist for every four nonphysician providers.

Growing in numbers

Currently AAs work in 15 states and the District of Columbia, 10 through licensure, and six through delegatory authority, meaning they are specifically requested by hospitals or physician anesthesiologists. Their jobs are interchangeable with the CRNAs, with the difference being a nursing degree for the CRNAs—who in certain circumstances can work without an anesthesiologist—and the emphasis on the anesthesia care team (ACT) for the AA.

“Anesthesiologist assistants have always been and will continue to be trained to work in the ACT model of patient care,” says Ellen Allinger, president of the American Academy of Anesthesiologist Assistants. “As such, AAs are the only anesthesia professionals who work solely within this team concept.”

The ACT concept was initially approved by the American Society of Anesthesiologists in 1982. It is defined by the ASA as properly trained and credentialed professionals who have certain aspects of anesthesia care delegated to them while concurrently being medically directed by an anesthesiologist.

The ACT concept is considered to be the optimal mode of patient care and has been supported by a study that states: “Medical direction by an anesthesiologist was associated with lower mortality and failure-to-rescue rates.”*

In another, more recent study, Vila and colleagues reviewed Florida state records, looking at death and injury rates following similar surgeries in ambulatory surgery centers, and compared them to surgeries performed in physician offices.[†]

“We found that the injury and death rate in offices was 10 times higher than in ambulatory surgery centers,” Dr. Vila says. “There were insufficient data from the physician offices to specifically determine the presence of a care team practice. However, the death reports did indicate that an anesthesiologist was present in only 15 percent of the office deaths. These results were suggestive that the presence of an anesthesiologist would decrease the likelihood of an adverse event.”

Ms. Allinger emphasizes that these studies show the importance of the anesthesia care team concept. “Surgeons are assured that when working with an AA, there will always be an anesthesiologist also involved in the anesthetic care of their patient.”

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*Frangou C. Anesthesiology assistants gain ground on physician extender map. *Anesthesiol News*. August 2005.

[†]Vila H Jr, Soto R, Cantor AB, Mackey D. Comparative outcomes analysis of procedures performed in physician offices and ambulatory surgery centers. *Arch Surg*. 2003;138(9):991-995.

"With the ACT, the patient is assured that, with the anesthesiologist plus the AA, there are two anesthesia providers," says Rob Wagner, AA-C, MMSc, RRT, director and assistant professor at the new AA program at Nova Southeastern University in Ft. Lauderdale, FL. "With the anesthesiologist and surgeon, there are two medical doctors. It is the highest standard of patient care."

Education and training

AAs are baccalaureate-degreed professionals with an education built on the pre-med prerequisite, just like the anesthesiologist.

At the new AA master of health science program at Nova Southeastern University, the anesthesiologist plays a major role in teaching the academic courses and training the AAs in the clinical setting. It's the clinical environment where the AA experiences first-hand the concept of the ACT.

"The AAs are trained from the get-go to be part of the anesthesia care team," says Mr. Wagner.

In fact, as a recent article in *Anesthesiology News* points out, AAs are involved in more complicated surgical procedures today, meaning even more choices for surgeons.

Dr. Oweida points out, "AAs understand the dynamics of complicated patients when you clamp the aorta, working on the carotid artery. They are good at responding medically and keeping the patient as physiologically stable as possible. Our number-one complication in vascular surgery is heart problems, so if you have somebody good at cardiac anesthesia, you will have better outcomes. [AAs] are gifted at many things and responses."

"They are trained to do more complex surgeries, like a ruptured aortic aneurysm, or anesthesia for heart and liver transplants," says Mr. Wagner. "AAs are trained in every surgical specialty involving anesthesia. That encompasses all surgical procedures, from plastic surgery, obstetric surgery, cardiac surgery, to neurosurgery."

More well-trained AAs are becoming available as more AA schools open, filling positions and helping solve the shortage of providers, specifically the lack of nurse anesthetists.

The opening of the Nova Southeastern University program, along with the program at South University in Savannah, GA, doubles the number of existing AA programs in the past three years. The trend to open more AA schools will most likely continue as more states license AAs.

That means more efficient delivery and the highest quality of medical care with the anesthesia care team,

"AAs, in my view, definitely have had an impact on positive outcomes," Dr. Oweida says. "We know that cases are getting more and more complicated in the ORs. The more providers, and the better trained and the more multidisciplinary they are, the more positive the outcomes you will have." Ω

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