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We are a service specialty, so we don't admit patients to hospitals. The patients "belong" to other practitioners, although we maintain an important responsibility to them while in our care.

Anesthesiology is an extremely rewarding career path. As with all careers in medicine, there are stresses to deal with, some of which are beyond our control. But the rewards of caring for patients and making them pain- and stress-free as they undergo operative procedures far outweigh the stresses. Medicine as a whole is changing, and anesthesiologists are at the forefront of these changes. We are leading the way in patient safety, operating room efficiency, surgical homes and cost management. We are also heavily involved in the science of medicine, researching how drugs work, the pathophysiology of diseases and outcome studies. If you want to become involved in these exciting areas, anesthesia is the field for you.

How should you prepare for training in anesthesia? Do your best to excel throughout your years of medical school. Though AOA is not a prerequisite to getting into a good residency program, doing well keeps your options open. Students usually feel they need to learn how to intubate in order to go into anesthesia. In truth, you'll learn how to do that during residency. It's best to concentrate on taking elective courses that interest you, such as cardiology, pulmonary, renal and critical care. Fourth year is an opportunity to take all the courses you'll never get to take again, and you should take advantage of it. If you are still unsure about anesthesia, the time to take an elective to confirm your choice is early in fourth year.

CHAPTER 4

Practicing in the Anesthesia Care Team (ACT)

Ronald L. Harter, M.D.

Professor of Anesthesiology and Chair
Ohio State University Medical Center

Anesthesiologists can deliver anesthesia care primarily in two modes of practice. The first mode is **Personal Performance**, in which the anesthesiologist personally administers all facets of a patient's perioperative care. This chapter will address the other primary mode – the **Anesthesia Care Team (ACT)**.

When providing perioperative anesthetic management in the ACT mode, the anesthesiologist may interact with three different types of providers:

- Anesthesiology residents
- Nurse anesthetists
- Anesthesiologist assistants

The interaction between the anesthesiologist and the other provider in the ACT is known as **Medical Direction**. Medical direction requires performance and corresponding documentation of participation by the directing anesthesiologist at specific points throughout the perioperative anesthetic management of the patient. Those points include:

1. Preanesthetic evaluation of the patient.
2. Prescription of the anesthesia plan.
3. Personal participation in the most demanding procedures in this plan, especially those of induction and emergence, if applicable.
4. Following the course of anesthesia administration at frequent intervals.
5. Remaining physically available for the immediate diagnosis and treatment of emergencies.
6. Providing indicated postanesthesia care (www.asahq.org/publicationsAndServices/standards/16.html).

Thus, the anesthesiologist in the ACT must remain closely involved in the preoperative, intraoperative and postoperative management of each patient for who medical direction is provided.

An anesthesiologist may medically direct up to two residents at one time, according to current guidelines for anesthesiology resident supervision from the Residency Review Committee for Anesthesiology (RRC) (www.acgme.org). When the anesthesiologist medically directs nurse anesthetists or anesthesiologist assistants, up to four cases may be medically directed at one time. Obviously, the number of concurrent sites

that an anesthesiologist medically directs depends upon a number of factors, including the available personnel and resources, the severity of illness of the patient, and the complexity of the surgical procedures to be performed.

A nurse anesthetist, also referred to as a Certified Registered Nurse Anesthetist (CRNA), is a registered nurse who has satisfactorily completed an approved nurse anesthesia training program. An anesthesiologist assistant (CAA) is a physician's assistant who has completed an approved anesthesiologist's assistant training program. CAA programs, which operate in the medical school model, have been in existence since 1969 and are presently fewer in number than nurse anesthetist (NA) training programs. The curriculum and prerequisites for entry into an CAA program are comparable to those for NA programs, but typically require pre-med course completion. The pathway into each program requires completion of a bachelor's degree prior to admission. At present, many states do not yet provide licensure for CAAs, although the number of states that formally recognize CAAs has increased in the past few years. Those anesthesiologists who practice in states which allow practice by both CAAs and NAs generally note that CAAs and NAs perform similar roles within the ACT (<http://www.anesthetist.org/content/view/14/38/>). CAAs are generally permitted statutorily to practice only under the medical direction of an anesthesiologist, whereas NAs may be supervised not only by anesthesiologists, but also by other physicians, as well as by nonphysician health care providers such as dentists and podiatrists, depending on the laws within one's state.

When nonanesthesiologists supervise nurse anesthetists, perioperative mortality rates are higher than when an anesthesiologist is performing the anesthetic or is providing the supervision. In a study of nearly 200,000 Pennsylvania Medicare patients from 1991–1994, there were 2.5 more deaths within 30 days of hospital admission per 1,000 surgical patients when no anesthesiologist was involved with the provision of the anesthetic care. When patients experienced complications during the perioperative period, there were an additional 6.9 deaths within 30 days of admission per 1,000 patients when no anesthesiologist was involved, compared to when an anesthesiologist was either performing or directing the anesthesia care.¹

In summary, anesthesiologists frequently practice in the Anesthesia Care Team mode. The close interaction between the directing anesthesiologist and the anesthesiology resident or nonphysician anesthesia extender (CAA or NA) results in the extremely safe delivery of anesthesia care for patients in a variety of surgical settings.

Reference:

1. Silber JH, Kennedy SK, Even-Shoshan O, et al. Anesthesiologist direction and patient outcomes. *Anesthesiology*. July;93(1):152-163.

CHAPTER 5

A Career in Academic Anesthesiology

Berend Mets, M.B., Ph.D., FRCA

Eric A. Walker Professor and Chair of Anesthesiology
Penn State Milton S. Hershey Medical Center

A career as an academic anesthesiologist is a riot. This career affords an opportunity for continuous personal growth while developing the specialty through educating residents, contributing to the literature by scholarship and research, and in this way building upon and further developing the history of anesthesiology.

While most of the academic anesthesiologists practice in 1 of the 125 academic anesthesiology departments in the United States and have built their career after completing residency training, there are colleagues who return to academia later in life while others work outside these centers and so contribute significantly to the development of our chosen specialty. Nevertheless, most successful academic anesthesiologists have chosen this career early on. The skills needed are hard won and the expertise developed takes many years to attain. As an academic colleague of mine states, "Private practice anesthesia is a job, while academic anesthesia is a career."



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