

LETTERS

Nurse Anesthesia Training in 1946

To the editor: As I grabbed the handle to board the train, I wondered, “What am I doing?” The year was 1946. I was 26 years old and had never ventured more than 50 miles (80 km) from my small hometown of Wilder, Idaho. My 2 brothers had gone away to the war, and I was left at home to help the family. I wasn’t complaining though; I had a great job as a registered nurse in nearby Boise, Idaho. I worked in surgery and was occasionally tasked with covering as the evening supervisor.

As the surgery supervisor, it seemed that most of the time I was stuck running around gathering supplies, while I noticed that the 2 nurse anesthetists simply sat at the head of the table! It certainly seemed a lot easier than what I was doing. Eventually I grew curious and asked them more about their work. They told me they were both back from the war and that they were involved in a new field of medicine called anesthesia, which had plenty of opportunities for new nurses. With their encouragement, I proclaimed to all that I, too, was going to do it! I was going to go to school and become a nurse anesthetist.

The nurse anesthetists had suggested a prestigious school called Case Western Reserve University in Cleveland, Ohio. Case Western Reserve’s roots dated to 1898 with the founding of the Lakeside Hospital Training School for Nurses. The school was formally established in 1923 as one of the first 2 colleges of nursing in a university, through a gift from its namesake, Frances

Payne Bolton, who was also the first congresswoman from Ohio.

The question then became, “Well, how am I going to do it?” Like most families at that time, we lived a modest lifestyle. Money was tight, and on top of that my grandmother had fallen ill. In light of all this, I thought I should stay home and take care of her. Besides, school was expensive and it could wait. My grandmother had other plans. One day she instructed me to go to the back of her dresser. Pinned to the back was a purse with \$800 in it. How that woman managed to save \$800 during those hard years still amazes me to this day. I felt I couldn’t accept such a large gift, but she insisted and that was it. I was going to anesthesia school on the next train to Cleveland.

Training consisted of didactic teaching as well as administering anesthesia. We worked daily on case after case after case. Our supervisors’ goal was to make sure we were able to administer anesthesia as safely as this time in history allowed. And so, we trained. Times were different then; nurse anesthesia was still in its infancy. So much was different.

Occasionally we would administer cyclopropane, but the main anesthetic at the time was ether. We absolutely reeked of ether! We would intubate patients by pulling them forward until their heads hung off the table. Muscle relaxants had just started to enter practice, giving the anesthetist “total control of the airway.” Before the discovery of muscle relaxants, many patients would die during the postoperative

period. It was incredibly disheartening and depressing. There were no monitors, merely sphygmomanometers (blood pressure cuffs) and stethoscopes. Vascular and cranial cases were extremely dangerous, and the mortality rate was extremely high. We insufflated with only a hook and Guedel’s stages of anesthesia chart to guide us. These conditions were particularly challenging for adenotonsillectomy. I remember one incident in particular. As I was taking a patient to the ward, his mother grabbed the rail of the stretcher and leaned over to kiss her child. There was a “pop,” a spark, and a sudden oral fire. It seemed that everything was dangerous.



The course was tremendously demanding, and I found myself frequently homesick. I lived in the dorms but had no friends, because half of the students had quit after the first few months. I was losing weight from stress and reeked

of ether. Who would want to date me or even befriend me? Several months into the course I received a telegraph that my grandmother had died. Yet there was nothing I could do; all the money was used for school and room and board. I had to stay in Cleveland. I had to finish my training.

Again, it was a different time. One black surgeon, although highly skilled, was not allowed to enter the room until patients were asleep.

Even with all these factors taken into account, Case Western Reserve was still among the best. Doctors from all over the country would come to complete their different rotations. Soon doctors began noticing that there was more to the anesthetist's job than sitting at the head of the table. Some became interested in this new occupation, and we trained them and they us. Their advanced knowledge of anatomy and physics and our cross-tutelage helped us all to perfect our skills. New and improved drugs were created and techniques improved. Through case after case I learned how to start intravenous



catheters, intubate, administer anesthetic, and deal with death. After 9 months of grueling training I lost 25 lb (11.25 kg), finally completed the

course, and came home. Certification became mandatory, and now I was a Certified Registered Nurse Anesthetist (CRNA).

Since then, roughly 72 years have passed and I've traveled all over the country administering anesthesia. This career has helped to provide a life for me and my children, even after the death of my husband. All 4 of my girls went to college and earned degrees, and one even became a CRNA herself.

One thing is certain though. Through all the trials and tribulations, as tough as they were, I would still grab the handle of that train and do it all over again.

Merna Graham Richart, CRNA,
1947 Graduate, as told by her daughter,

Rhonda K. Coonse, CRNA
Boise, Idaho

NVM for Prevention of Upper Airway Obstruction

To the editor: Regarding our October 2019 *AANA Journal* article titled "Nasal Ventilation Mask for Prevention of Upper Airway Obstruction in Patients With Obesity or Obstructive Sleep Apnea" (Vol 87, No. 5): The second to last sentence of the abstract has been edited to correctly reflect the results of the quality improvement project. *Intraoperatively, the group of patients who did not wear an NVM (No NVM group) compared to the group that wore an NVM (NVM group) had a 3 times greater chance of having at least 1 occurrence of an oxygen saturation less than 90% and an almost 4 times greater chance of having an oxygen desaturation greater than 5% of baseline oxygen saturation.*

Thank you to the reader who pointed this out.

Connor E. Willard, DNP, CRNA
Andi N. Rice, DNP, CRNA
Marion E. Broome, PhD, RN, FAAN
Susan G. Silva, PhD
Virginia C. Muckler, DNP, CRNA, CHSE

Double Gloving and Infection Control

To the editor: Regarding the article on the use of double gloves during intubation (*AANA Journal*, August 2019, Vol 87, No. 4): The importance and continued improvement of infection control practices in the operating room (OR) always need to be brought to the center of attention, as is noted in the above-referenced article. The importance of infection control risks in healthcare settings is being increasingly recognized with the accumulation of data.

According to the updated American Society of Anesthesiologists guidelines for infection control, it is estimated that 5% to 10% of hospitalized patients in the United States, or approximately 2 million people yearly, acquire 1 or more health-care-associated infections (HAIs).¹ Infection is a contributory cause in several thousand deaths each year and results in excess healthcare costs of \$4.5 to \$5.7 billion per annum. The prevalent infections, responsible for 80% of the cases of HAIs, include urinary tract infections and surgical site infections. These 2 types of infections total 20% of cases but account for one-third of the associated costs. This problem is compounded because etiologic organisms in 70% of these infections are resistant to 1 or more antibiotics.¹

The anesthesia provider plays an important role in preventing infection in the OR. Munoz-Price et al² recently emphasized strategies of preventing contamination of the OR, which included proper hand hygiene before entering and exiting the OR and removing soiled gloves before touching surfaces such as the anesthesia cart or anesthesia machine. Wearing double gloves for intubation is the safest way to prevent contamination when immediate hand hygiene is impossible, because the outer gloves can be removed. A sufficient amount of attention is not paid to contamination that occurs

on OR work surfaces by saliva. Anesthesia providers' hands may become contaminated with upper airway secretions while they provide airway management and endotracheal intubation. Providers may not be able to perform hand hygiene during this time, and cross-contamination of the anesthesia work area ensues.² The anesthesia provider must not ignore other situations where contamination can occur, such as placing a gastric tube or an oral airway in a patient, or even a laryngeal mask airway, when the glove can get contaminated by saliva. Use of the double glove technique is appropriate and necessary in these situations. Anesthesia work surfaces, intravenous fluid poles, stopcocks, and even personal stethoscopes are contaminated by placing the used blade in temporarily convenient places, such as on a patient's chest or on the OR table. In their simulation study in 2015, Birnbach et al³ suggested use of a sheath in which a used laryngoscope blade is placed immediately after endotracheal

intubation, significantly reducing contamination to the patient and the intraoperative environment.

Providers may not have a clear picture of required practices because infection prevention and control policies specific to anesthesia care in the OR are not universal and audits of infection prevention practices are not routine. Additionally, because the work environment is generally fast paced, this can jeopardize the practice of anesthesia providers changing their gloves or double gloving.

There is no quick solution to the problem of infection control in the OR. It needs to be made a paramount concern to the hospital and then followed up with ongoing structured, routine reminders to anesthesia providers, along with scheduled audits to review results. An "Infection Control Alert" poster could be located by the anesthesia cart listing the crucial practices needed to ensure a safe environment. The poster should give a clear and succinct message that reminds

anesthesia providers the steps they need to take before entering the OR and during surgery. To be successful, this message requires the support of management. The ultimate plan is to have these practices become as routine as putting on scrubs and caps for anesthesia providers.

REFERENCES

1. American Society of Anesthesiologists Committee on Occupational Health Task Force on Infection Control. Recommendations for Infection Control for the Practice of Anesthesiology. 3rd ed. Schaumburg, IL: American Society of Anesthesiologists; 20.
2. Munoz-Price LS, Bowdle A, Johnston BL, et al. Infection prevention in the operating room anesthesia work area [published correction appears in *Infect Control Hosp Epidemiol*. 2019;40(4):500]. *Infect Control Hosp Epidemiol*. 2019;40(1):1-17. doi:10.1017/ice.2018.303
3. Birnbach DJ, Rosen LF, Fitzpatrick M, Carling P, Arheart KL, Munoz-Price LS. A new approach to pathogen containment in the operating room: sheathing the laryngoscope after intubation. *Anesth Analg*. 2015;121(5):1209-1214. doi:10.1213/ANE.0000000000000854

Archana Mane, MD

Albany, New York