



Photograph by Lee McClelland, CRNA

Explore the World of a Nurse Anesthetist!

Sherly Shaji, CRNA, documents a blood transfusion in the anesthesia chart.

The purpose of this educational activity is to provide professional nurses with a realistic and accurate view of the exciting world of a nurse anesthetist, including the necessary education and experience to become one, their key responsibilities, as well as the daily challenges they may face. In addition, the activity will cover some of the changes that have occurred in anesthesia and the nursing practice implications of these.

Allan Lee McClelland, CRNA

Mr. McClelland is currently a CRNA with the **Dallas VA Medical Center**. He graduated with his baccalaureate degree in nursing from The University of Texas at Arlington and then while serving in the United States Air Force, attended Nurse Anesthesia school, graduating in 1988. He has earned his master's degree from Texas Wesleyan University and has been an associate faculty member in the Nurse Anesthesia program for five years.

Disclosure Statements: *The planning committee and author report no relevant financial relationships or conflicts of interest. The author does not intend to discuss any unapproved or off-label use of any product. There is no commercial support for this educational activity. Accredited status does not imply real or implied endorsement by the provider, Texas Nurses Association, or ANCC's COA of any product, service, or company referred to in this educational activity.*

At the completion of this educational activity, the nurse should be able to:

1. Identify the key steps and processes in becoming a nurse anesthetist.
2. Recognize the core responsibilities and potential daily challenges of a nurse anesthetist.
3. Describe some of the recent changes in anesthesia protocols/materials and the related nursing practice implications.

Requirements for Successful Completion

1. Read the article.
2. Complete the post test questions and program evaluation by circling the selected responses on the post test.
3. Fill out the registration form.
4. Send registration form, post test, and a check for \$12.00 to:
Continuing Nursing Education
The University of Texas at Arlington
Box 19197
Arlington, TX 76019-0197
5. Send before February 15, 2011.
6. A passing score is 80% to receive 1.0 contact hour. If you pass, your CE certificate will be forwarded to you. If you do not pass, you will be notified and may repeat the test once at no cost.

The Start

My journey into this exciting world of nurse anesthesia started many years ago. I was working as an orderly, doing whatever the nurses needed. I enjoyed the work, liked being in the hospital and around the patients. The decision to go to nursing school was pretty firm in my mind, but I had not really given any thought to what area of nursing I wanted to specialize in after graduating.

Then one evening, a Code Blue was called. I was there to just help, get materials, again anything to assist the nursing team. During the Code, I saw two CRNAs step in and manage the situation. They made immediate life-saving decisions, directed the Code activities, worked collaboratively with everyone else on the team, and they sure impressed me! After the Code, I had the opportunity to talk with both of them, asking about their roles, their world...

and that is when my journey started. They both have served as mentors and guides for me, helping along my path to becoming a Nurse Anesthetist.

They impressed upon me that the world of a nurse anesthetist did include the serious responsibility to provide care for surgical patients from safe induction to smooth awakening and then recovery from anesthesia. They also made me aware, as I am today, that the nurse anesthetist has one sole focus during that surgery – the patient.

Let me share with you the exciting, rewarding and challenging world of a Nurse Anesthetist!

Entering the World

There is much mystery and in some cases, myths, about nursing roles in surgery, particularly anesthesia. Let's try to unveil and disband the mysteries and learn the real story! Becoming a Certified Registered Nurse Anesthetist (CRNA) requires a certain rigorous educational pathway. All CRNAs must have a baccalaureate degree in nursing and must graduate from an accredited Nurse Anesthesia school, this is where you can start making some choices today. BSN graduates must attend a graduate program attaining a master's degree (MSN) in nurse anesthesia. There are also a few doctoral degree programs available today for Nurse Anesthesia. To apply to any of the programs, you must meet some basic requirements including, GRE, a minimum of one year of critical care experience, ACLS and PALS certifications, and achievement of the CCRN certificate. In fact, in my experience of over twenty years, I have found that the more critical care experience a nurse has before entering the nurse anesthesia program, the better the experience and outcome will be for them! The programs are not easy from an academic perspective and they all require a significant amount of clinical practice; a three year program may involve twelve

months of didactic instruction and classes plus sixteen months of clinical rotations. It is advised not to work while in nurse anesthesia school. All your time will be allotted to studies, reading and preparation for clinical patient care assignments. Given the technology of today, many of the didactic courses are available online. All of the education and practice are focused on assuring that the CRNA student learns the procedures, the agents and the pharmacology, the patient assessment processes, and can demonstrate safe, comprehensive care for a surgical patient. As with any specialty in nursing, quality and safety are critical.

Nurse anesthetists after completing their special program then must take the national exam, conducted by the American Association of Nurse Anesthetists. Successful completion of this exam earns the individual the coveted title of CRNA! Next step: the individual must seek licensure as an

Advanced Practice Nurse in whatever state they choose. The Advanced Practice Nurse license is separate and distinct from the Registered Nurse license so both are very important! Each state is different in terms of their licensing procedures, but all do require the CRNA certificate as achieved through the national examination.

Maintaining the certification in nurse anesthesia does require a consistent commitment to learning. Each CRNA must show evidence of forty hours of continuing education every two years; the continuing education must be specifically focused on the practice components of nurse anesthesia. This can be time consuming, but necessary in order to stay

informed of the many changes that are occurring in anesthesia care. Part of maintaining certification is the need to recertify with the national association every two years. This does not require an additional examination, but does mean that each CRNA must submit evidence of their continuing education and data on number and types of surgical/anesthesia cases they have done in the prior two years.

The Many Employment Options

The employment opportunities for nurse anesthetists are very exciting and many are needed! Predominantly, CRNAs are working in hospital settings in the Surgical Services departments. In most cases they are employees of the hospital, although they can also be hired by anesthesiology groups that then may contract with the hospital. There are also opportunities for CRNAs to work in individual surgeon offices, for example, plastic surgery. They may also work in free-standing surgical centers. Another employment option is "locum tenens" – this refers to working for an agency that places CRNAs in hospitals that have a temporary need. These can be short contracts for a few weeks, or can extend for many months.

Working in a hospital, as most CRNAs do, requires applying for and being granted privileges through the medical staff organization. Each

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hospital and health system is somewhat unique in their process, but it is a critical next step. This process can take a long time to complete – often six to twelve weeks.

Once privileges are received, the CRNA's practice in the hospital/surgical suite will be decided by both state regulations and the individual hospital policies. For example, in Texas, CRNAs can practice without the direct supervision of an Anesthesiologist. Some states do require supervision by an Anesthesiologist; this information is available from State Boards of Nursing as well as the AANA. In the individual hospital, the policy may in fact state that the Anesthesiologist must review the anesthesia care plan and be present for induction and for any critical events. Each health care organization is unique in this regard. It is the responsibility of the CRNA to be fully aware of both the state and their institutional policies.

Often new CRNAs are concerned about malpractice insurance. In a litigious world as we have today, it is something to be aware of and to ask about. As an employee, the health care organization often provides malpractice insurance, however the individual practitioner should explore all of the options and make their own reasoned decision for additional coverage. One important aspect of any malpractice insurance for a CRNA is what is termed “tail coverage” – this refers to the potential for a patient/family to file a lawsuit long after the surgical/anesthesia event. This special coverage would offer the practitioner a safety net in that circumstance.

For each nurse anesthetist, the choice of a work environment is really individual. There are so many needs today for CRNAs in many locations, that the options are amazing. Each nurse anesthetist has to decide where they want to start their practice and then grow their skills, perhaps in a different arena or setting. This is just part of why the world of nurse anesthetists is so exciting!

The Key Relationships

At the core of CRNA practice is the relationship with the patient. It is not a long-standing relationship, but one that is very important. From the first contact in the Pre-Operative area, through the surgery, and into the PACU, it is the trust and security that the patient feels about their procedure and the anesthesia that can make such a difference in their overall outcome. Patients do get anxious about anesthesia, especially with media reports of “awakening” during the procedure. It is all about taking the time to explain everything, how I will prevent awakening, how closely they will be monitored the entire time. This is a relationship that CRNAs value, and it makes a big difference to the patient and their outcomes.

It does take a whole team of professionals to assure that the surgical experience is a good for the patient. CRNAs work very closely with the other nursing staff, with the surgeon and his assistants, with everyone in the support departments – the focus on the patient's safety and the quality of their outcome is the primary goal for everyone. Good relationships between the team members can truly help to keep this focus and achieve the goals.



Photograph by Lee McClelland, CRNA

Sherly Shaji, CRNA, begins a blood transfusion.

The Challenges

It is an exciting world that I work in as a nurse anesthetist. But it does have its challenges. Every patient is different – it may be the third hernia operation of the day, but each patient is so unique. Their history, their current health, their lifestyle – all of this has such an impact on their anesthesia experience and it certainly adds a challenge to every case for a CRNA. And every patient has their own unique fears; some they tell me about, others we really don't know. Part of the challenge is always knowing that this one patient is unique in many ways and may respond to the anesthesia in an unexpected way.

One of the daily challenges is staying constantly focused on the patient's condition. This may sound simple, but it is not. Like almost every clinical area of the hospital, the OR room is very busy, with many other profes-

signals carrying out their respective responsibilities – the OR nurses, the surgical technicians, and of course, the surgeons. Individual surgeons may want music on – that can be good, but I have to be alert to keeping the noise level down, so that I can always hear the monitors and keep my attention on the patient. Getting distracted, even with conversations or music is a challenge I need to avoid.

Because of the individual uniqueness of each patient, their reactions to certain drugs and anesthetic agents may differ. They may be an “easy intubation” and then present problems when they are extubated. The patient may have nothing remarkable in their health history and yet may react very negatively to an anesthetic. In another circumstance, the patient may not have mentioned in the health history that they take certain street drugs, like cocaine; a few minutes into the case after they are intubated, their blood pressure starts to drop and they are very quickly hypotensive and require immediate interventions. The key to dealing with this challenge is always being alert to the possibilities, being prepared for anything.

In the following case scenario, the challenge was real....

Challenging Case!

The patient was having an ENT surgical procedure this one day. The intubation went very smoothly, patient was hemodynamically stable throughout the procedure. Nothing remarkable about the history or medical status pre-operatively and the procedure was uneventful. When the case was completed, I went through the routine ‘wake-up’ process, increasing the oxygen, carefully extubating. The patient spontaneously started to breathe on her own – always a good sign! A few minutes later however, the patient started to struggle to get a breath; within a few minutes the patient became hypotensive and bradycardic. On careful assessment and with the full Anesthesia team now in attendance (we always call for our back up when we reach a critical point!), and after multiple attempts to oxygenate and intubate, we realized that the airway was swollen closed. In a matter of seconds, the surgeon called for a scalpel, performed a tracheostomy – the sweetest sound I heard was the patient taking a full breath as soon as the trachea was opened. This patient did have to go to the ICU, but progressed well and made a full recovery. Challenging, yes – just have to always be prepared for the unexpected!

Trends and Changes

Change is constant in health care and certainly in the world of a nurse anesthetist. One of the biggest changes we have seen over the last few years is the incredible shift from inpatient to outpatient or day surgery. Patients that stayed four or five days are now going home the afternoon of their surgery. This has a lot of implications for the medications and anesthetic agents that we might use for surgery. For example, the anesthetic administered must be potent enough to induce a sleep state, but short lived, so patient awakens soon after surgery. Medications are given to curb the nausea and vomiting side effect that is commonly associated with anes-

thesia. Postoperatively the implications of these newer agents/medications include assessing the patient closely for any reaction; much easier and safer to deal with a reaction while they are still in the hospital rather than at home.

The explosion of technology is another big area of change for the world of the nurse anesthetist. Fortunately, gone are the days of having a simple cardiac monitor and a second hand watch as technology! The technology is incredible and does add a great deal of safe-guards to managing patients under anesthesia. However, the technology must always be checked and rechecked for accuracy; and the nurse anesthetist must stay abreast of the latest technical device. With the enhancement of electronic medical records, documentation today often can happen quickly with keyboards and direct links with the patient monitoring devices. Avoiding the “awakening” or recall awareness experiences can now be handled with the use of EEG monitor devices, which can tell the nurse anesthetist if the patient is in the right phase of sleep, or if they need more anesthetic agents.

A key challenge today, in fact it always been a challenge, is the issues surrounding patient safety in the surgical environment. The nurse anesthetist is a key member of the surgical team and has responsibility for constant vigilance on behalf of the patient. Assuring that “time-outs” are used to check on all the “rights”, right patient, right surgery, right side/location, is a serious responsibility for everyone on the team including the CRNA. Checking the medical record, listening to the surgeon and circulating nurse describing the surgery and the verifying the correct site before proceeding – the nurse anesthetist must be on task with this activity. Medication safety is critical; checking all medications, labeling syringes, monitoring IV pumps and invasive lines – again, part of the safety role of the CRNA. Safety with lasers and laparoscopic equipment is also a concern. The CRNA along with the rest of the surgical team must be aware of the potential for fires with the use of such equipment in an oxygen rich environment. Assuring that water is always near the surgical table is part of the safety routine that the CRNA can implement.

Consider this World!

Take a close look at the exciting world of nurse anesthesia, with its preparation and challenges; think about the new technology and safety nets that are being developed and used; being on the cutting edge of some amazing surgical interventions. Know that every patient and every procedure therefore is unique. Most of all, I want you to look into my world and see the critical role of the nurse anesthetist as the individual that is there for the patient – my sole focus is that one patient. The satisfaction that I get when the patient has a safe and comfortable and easy time through surgery and recovers smoothly is what keeps me coming back each day. A great career option for you to consider – journey into the world of nurse anesthesia!

NL

A Day in the Life...

To get a much clearer picture of the role of a CRNA, come with me and walk through a day in my life!

It starts really early in the morning (not unusual for nurses in many specialties!). This is my time to review the cases that I have been assigned, carefully reading over the current problems the patient is having, why they are having surgery, and exactly what surgery is planned; their medical histories, laboratory reports, radiology and EKG reports, and any other information that may be pertinent to their care. In fact, what I do is apply the nursing process to every part of my day for every patient! I spend time developing an anesthesia care plan for each patient at this point.

Time to check my equipment is next! This is where the nurse anesthetist begins to function like an airline pilot. A careful checklist – somewhat like the pre-flight checklist in the cockpit – is completed on the Anesthesia machine, on all of the technology that may be used on the patient, and all of the medications and anesthetic agents I may need during the case. That checklist is done every time I start my day in a particular Operating Room

and will be done again if I have to move to another room. This checkout is all about patient safety, so it's critical not to skip any steps.

Once I have reviewed the medical record, I go to the Pre-Operative Area and meet the patient. This is a critical time for assessment and for starting the important nurse-patient relationship. I ask lots of questions, in fact I do a full head-to-toe review of systems during this process. It is also important for me to know if the patient takes any medications, and exactly what they are, and if they smoke or drink alcohol. In some cases I must ask if they use any “street drugs” – this is a serious issue today, and these materials can cause serious cardiovascular reactions with anesthetic agents, ones that will place the patient in jeopardy. Prevention of any complication is critical to the CRNA role. Based on what I find during this time, I may need to alter the anesthesia care plan.

Part of this preoperative visit is focused on explaining my role to the patient, as well as giving them a full, layman's explanation of what will occur each step of the process, and what they can expect. We discuss the anesthesia plan and the risks of the anesthesia. I try very hard to

impress on the patient that they will be my sole focus the entire time that they are in the Operating Room, just as important to me as a member of my family; their safety, their comfort is my only job. I answer lots of questions, describe exactly what to expect, and then once I have the “okay to proceed” from the OR circulating nurse, I take the patient into the Operating Room. In some cases, prior to transporting them to the OR, I will administer gastric reflux prophylactic medication, such as Metoclopramide and Sodium Citrate, which really helps reduce risk of aspiration on induction of anesthesia. Also, an IV sedative such as Midazolam, (Versed) medication will be given just to help relax them.

Once the patient is in the OR there are IVs to position, potentially

other invasive lines (arterial and central venous) to start, monitors to attach, and oxygen to administer. Completing the induction and proceeding with intubation is a critical time. Being constantly aware of how the patient is doing, how they are responding to the anesthetic agents, their cardiovascular and respiratory status is my chief responsibility. Once the operation has started, I do watch the surgery to check on progress, while continuously assessing the patient.

When the surgery is completed, I am responsible for waking the patient. This again is a critical time and requires my full attention. An easy, comfortable (pain-free) wake up experience is what I strive for, and in most cases it happens as planned. We then move the patient to Post-Anesthesia Care Unit (PACU); I assess the patient status and needs, and communicate and collaborate with the PACU nursing staff of surgical/anesthesia events. This is truly a team effort and many nurses are key to success!

I say goodbye to the patient at this point – our relationship is over, the recovery phase has started and they will soon go home or move to their inpatient bed.

Time to move on to the next patient, the next surgery, the next recovery! Each step of the way, I use the nursing process and keep the patient's best interest at the center of all that happens. **NL**



Pictured above: Anesthesia machine and monitors

Registration Form and Test for **Continuing Education Credit**

"Explore the World of a Nurse Anesthetist!"

Purpose:

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Objectives:

- At the completion of this educational activity, the nurse should be able to:
1. Identify the key steps and processes in becoming a nurse anesthetist.
 2. Recognize the core responsibilities and potential daily challenges of a nurse anesthetist.
 3. Describe some of the recent changes in anesthesia protocols/materials and the related nursing practice implications.

How to earn One Contact Hour:

1. Read the article.
2. Complete the post test questions and program evaluation by circling the selected responses on the post test.
3. Fill out the registration form.
4. Send registration form, post test, and a check for \$12.00 to:
Continuing Nursing Education
The University of Texas at Arlington
Box 19197
Arlington, TX 76019-0197
5. Send before February 15, 2011.

Within three weeks after receipt of your post test and registration, you will be notified of your results. A passing score is 80%. If you pass, your CE certificate will be forwarded to you. If you do not pass, you will be notified and may repeat the test once at no cost.

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Registration Information:

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State(s) of Licensure: _____

Telephone Number: _____

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Post Test Questions for Continuing Education Credit

Article: Explore the World of a Nurse Anesthetist!

Please circle your response for each question

1. The basic requirements for entry into nurse anesthesia educational programs include:
 - a. BSN and six months of critical care experience.
 - b. BSN, MSN, and two years of critical care.
 - c. BSN, GRE, minimum of one year of critical care experience, ACLS, PALS, and CCRN.
 - d. MSN and three years of critical care experience.
2. To attain the credential of "CRNA" the graduate of an accredited nurse anesthesia program must:
 - a. Have six months clinical experience in anesthesia.
 - b. Apply for a position and be accepted.
 - c. Complete their MSN and one year of experience.
 - d. Successfully pass the national examination, offered only by AANA.
3. A Nurse Anesthetist's day would routinely start with:
 - a. Intubating the first patient.
 - b. Meeting the patient in the preoperative area and completing a full assessment.
 - c. Reviewing the anesthesia care plans with the anesthesiologist.
 - d. Checkout of anesthesia machine and set up of medications.
4. One of the challenges of the CRNA role is:
 - a. Staying constantly focused on the patient's condition/status.
 - b. Having to work with a variety of surgeons.
 - c. Long hours.
 - d. Required documentation.
5. In preparing a patient for anesthesia and prevention of aspiration, it is sometimes helpful to administer:
 - a. Pain medications.
 - b. Oral antibiotics.
 - c. Gastric reflux prophylactic medications.
 - d. Nothing until they are intubated.
6. Anesthesia equipment checks are done by the CRNA:
 - a. At the beginning of the day and any time they must move to a different OR suite.
 - b. Before caring for each patient.
 - c. Twice in each day.
 - d. At the end of the day, to get ready for the next day's schedule.
7. Many patients experience anxiety about surgery and anesthesia, often related to fears of:
 - a. Awakening during the procedure.
 - b. Long delays in the surgery starting.
 - c. Reacting to certain medications.
 - d. Painful IVs.
8. Some of the changes in health care that have impacted the role of the Nurse Anesthetist, include:
 - a. Rapid expansion in outpatient surgeries.
 - b. New anesthetic agents and pharmacological agents.
 - c. Growth in the use of lasers and laparoscopic procedures.
 - d. All of the above.

9. To assure safety for the patient, the nurse anesthetist can:
 - a. Be certain that the "time-outs" occur before every case.
 - b. Check the patient's name band more than once.
 - c. Move the patient quickly to the Recovery Area.
 - d. Avoid conversations with the rest of the surgical team.
10. Maintaining CRNA status requires:
 - a. Attaining a doctoral degree within five years.
 - b. Taking the national examination every four years.
 - c. Passing two academic classes each year.
 - d. Securing forty hours of continuing education every two years, and submitting data on types and numbers of cases managed.

Program Evaluation

	Strongly Disagree				Strongly Agree
Objective 1 was met.	1	2	3	4	5
Objective 2 was met.	1	2	3	4	5
Objective 3 was met.	1	2	3	4	5
The article was effective as a learning resource/tool.	1	2	3	4	5
The objectives were relevant to the overall purpose.	1	2	3	4	5
The activity met your expectations.	1	2	3	4	5

List two ways that you will integrate what you learned in this activity into your practice and/or work environment: _____

The following were disclosed:
Requirements for successful completion

	Yes	No
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Conflicts of interest

	Yes	No
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Commercial support

	Yes	No
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Non-Endorsement of Products

	Yes	No
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Off-label use

	Yes	No
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Did you perceive any bias that was not disclosed in this activity?

	Yes	No
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If Yes, please describe _____

State the number of minutes it took you to read the article, complete the test and evaluation _____ min