The growing geriatric population in this country makes it increasingly difficult to deal with the number of do-not-resuscitate (DNR) orders. In part, this is due to an increase in the number of elderly undergoing anesthesia and surgery. It can also be attributed to a rise in complex legal, ethical, and moral issues these orders pose for the healthcare professional caring for the DNR patients, including anesthetists.

The term “DNR” is confusing to many, including healthcare professionals. As patients progress through the perioperative period, this confusion is compounded by the fact that administration of anesthesia encompasses interventions that include intubation, ventilation, and fluid replacement. These interventions may be regarded as resuscitative efforts outside the operating room. The anesthetist must identify and sort through a maze of conflicting courses of action, which must match the patient’s desires and personal rights.

The topic of DNR orders is addressed as well as some of the moral and ethical dilemmas they pose for the Certified Registered Nurse Anesthetist (CRNA). Some solutions are offered to help the nurse anesthetist make those decisions that are most “right” for the patient.

Key words: Anesthesia ethics, do-not-resuscitate (DNR), ethical decisions.

Introduction
Technology and technological innovations have had a significant impact on healthcare. In the last decade, a plethora of technological advances has radically altered and challenged many of society’s fundamental concepts about life and death. For example, our improved ability to prolong life through such interventions as mechanical ventilation and pharmacologic intervention has caused a reexamination of fundamental questions such as: When does death occur? What constitutes quality of life? When should life-sustaining interventions be stopped? What are the limits of personal privacy? Legal changes such as living wills and the use of advanced directives have further complicated the intricate, complex, and overlapping legal, moral, and ethical problems that technological interventions create.

Fine suggests that the “rightness” of ethical dilemmas in healthcare has been influenced by “rapidly advancing technology, economic constraints, shifting demographics, the medicolegal climate, and the heterogeneity of mores within our society.” The anesthetist has the responsibility to determine the rightness for each ethical dilemma.

The historical turning point at which technological advances first created ethical dilemmas of
this sort occurred in 1976. That year, the parents of Karen Ann Quinlan sought a court order giving them the right to have all of Karen’s life-sustaining medical interventions discontinued so as to allow her to have a natural death. Karen was a young woman in her mid-20s who became comatose as a result of ingesting a mixture of alcohol and drugs. As a result of this and subsequent cases, the courts increasingly recognized a patient’s right to refuse medical treatment, terminate treatment in special instances, and determine when and under what conditions medical interventions to sustain life could be terminated. This led to the widespread use of DNR orders, under which a terminally ill patient can prevent the initiation of resuscitative efforts if he or she should suddenly die while under medical care.

**Defining DNR**

While the geriatric population in the United States currently represents about 11% of the total, this percentage is expected to grow in the next decade. As this population has risen, a number of authors have challenged and discussed the meaning of do not resuscitate (DNR). Their consensus suggests that a patient who is assigned the DNR status is usually someone who has a terminal, debilitating pathological process or is in the process of dying. Most DNR patients are elderly, have failing health, and present with a metastatic carcinoma.

The term “DNR” is often confusing. DNR is typically referred to as no “no cardiopulmonary resuscitation (CPR),” “slow code,” or “drugs only code.” No CPR, slow code, or drugs only code can be interpreted as not performing CPR resuscitation without intubation or the initiation and utilization of vasoactive drugs only, respectively. However, the interpretations of no CPR or slow code are intangible, and the interpretation varies with the individual organization. The true meaning of DNR clearly remains elusive.

Truog has suggested that since 1976 hospitals have developed DNR policies to limit invasive and painful interventions. Blackhall recommends that informed consent and specific discussion about possible resuscitative measures take place with the patient and family prior to the anesthetic. The practitioner must ask if the DNR order should be rescinded during the perioperative period and recovery. The decision to rescind the DNR status is an ethical question involving patient autonomy, the practitioner’s sense of “doing good,” and achieving a good outcome from the anesthetic.

Beneficence, the goal of achieving good outcomes, is a high priority in most organizations. In addition, reducing the perioperative mortality and morbidity in the operating room has been a time-honored objective, as is the ethical preservation of life. The current national discussion of active euthanasia (an action designed to cause a patient’s death), which was initiated by the actions of Dr. Jack Kevorkian, creates disarray in these current ethical standards and beliefs.

Palliative surgical procedures are performed on DNR patients and are usually intended for comfort or extended care. These procedures may be less extensive, such as tracheostomies, central line placement, and gastrostomy tube placement. Or, the surgical procedures can be quite extensive such as a colon resection, a colostomy, or a debulking neck dissection. Despite the extensive literature and discussion surrounding the DNR patient and the adoption of a variety of scenarios, including full resuscitative efforts, continuation of DNR orders regardless of anesthesia intervention, and a position somewhere between the previous two, there has still been no single standard to emerge for the DNR patient who is receiving anesthesia or the DNR patient who is going to the operating suite.

The concerns facing the anesthetist are those of ethics, morals, and legality. These complex issues can be addressed through a vigorous dialogue. In addition to other questions, one must ask: At what point in the anesthetic procedure does the anesthetist not resuscitate? Does treatment comply with the patient’s wishes? Is the patient expressing his or her true wishes or those of his family or healthcare provider?

Anesthetists face many legal, moral, and ethical dilemmas when they are confronted with the DNR patient for whom there may be no clear solution. Keffer and Keffer believe that “providing a treatment the anesthetist feels is indicated, by virtue of his or her experience, education, and training, may actually be ignoring the patient’s moral rights as an autonomous being.” Furthermore, as CRNAs can we allow a DNR patient to die when faced with the possibility of a reversible arrest during anesthesia? Finally, CRNAs must dispel the possibility of “hidden messages” when discussing the possibility of DNR with the patient by asking the following questions: Do DNR patients really want everything medicine can offer for resuscitation, or do they really want life support terminated?

For the anesthetist to answer the questions surrounding the DNR patient, there are several guidelines that must be considered. First, the anesthetist must reflect upon the fact that the anesthesia agents administered inherently depress or alter...
the patient's entire state of being. Second, the resuscitation must not violate the patient's right to die with dignity. Third, the anesthetist must adhere to the policies established by legal entities.

**Anesthesia and preparation of the DNR patient**

There are many preparations that the CRNA faces before the delivery of anesthesia to any patient. Some of these include physiological, pharmacological, psychological, ethical, and moral preparation. However, for the DNR patient there are some special considerations. CRNAs must be sensitive to and evaluate aspects of the anesthetic that might be considered resuscitation and the extent to which intervening causes such as hemorrhage, myocardial infarction, and pulmonary emboli be treated. The CRNA may also become a resource in determining when the legal guidelines that were agreed upon in the preanesthetic period should be violated during anesthesia for the DNR patient.

Cohen and Cohen proposed five questions to be considered when addressing patients who have been assigned a DNR status prior to the perioperative period. Although these questions are not recommended as a final solution to the problems facing the anesthetist, they do provide some guidelines for beginning the process. These questions are:

1. Should the surgery be performed?
2. What is the meaning of resuscitation during surgery?
3. Are the patient's basic objectives compromised if resuscitation is withheld?
4. Are the operating room professionals willing to retain the DNR status?
5. Has everyone involved in the process clearly communicated his or her wishes, beliefs, and feelings?

Preparation of the DNR patient for an anesthetic procedure is an important component of perioperative planning. During general anesthesia, patients may experience spontaneous or iatrogenic intraoperative events. In the DNR patient, his or her resuscitative status during anesthesia is a prime concern, especially for those who are critically ill.

A specific discussion and an informed consent that addresses DNR status should include the patient and the family and should precede any anesthetic intervention. The decision to rescind the DNR status is an ethical and moral decision that involves patient autonomy, the practitioner's sense of "doing good or right," and achieving a good surgical outcome. The CRNA should inquire as to how long the DNR order should remain suspended and obtain some guidelines to follow in the event that an arrest should occur during anesthesia or in the immediate postanesthetic period.

As a patient advocate, the nurse anesthetist has a responsibility to be involved with other healthcare team members and to involve the patient and his or her family in this process.

Patients who arrive in the operating room with DNR orders present an ethical dilemma and no clear solution for the anesthetist. CRNAs providing care for these patients must carefully guide them through a decision-making process that accommodates the patient, the CRNA, and the organization to resolve this dilemma. Guidelines must be provided in organizational policy; however, each situation should be handled as unique. The patient should remain actively involved in his or her healthcare decisions. Healthcare professionals must then respect and follow the decisions and direction that the patient has carefully given.

**Conclusion**

When the CRNA is confronted with a DNR patient, there are several measures that must be considered. Bremun suggests that first it may be appropriate to obtain counsel from experts in the field of ethics or the hospital ethics committee. Second, all factors that lead to a good ethical decision should be sought. Finally, a reasonable plan for a course of action should be developed in writing by all parties who are involved in the care of the patient.

Truog supports the suspension of DNR orders during anesthesia for three reasons. First, general anesthesia involves the deliberate depression or manipulation of vital systems, which sometimes leads to resuscitation. Separating the administration of anesthesia, manipulation of vital systems, and resuscitation is difficult and artificial.

Second, suspending the DNR order during anesthesia and surgery is important because the difference between cardiorespiratory arrest that occurs spontaneously and cardiorespiratory arrest that occurs as a result of therapeutic intervention is difficult to discern.

Third, administration of an anesthetic to a physically unstable patient involves a delicate balance between analgesia and/or amnesia and cardiovascular collapse. Suspension of the DNR order allows the practitioner to use all of his or her skills by providing the best anesthetic for the patient, including CPR.

Management of DNR patients in the operating room must remain optimal to decrease perioperative mortality. In a retrospective study, Schwenzer found that the administration of CPR
in universally accepted futile situations can be successful. She also concluded that the "decision to withhold CPR should be made in individual patients rather than by their diagnostic classification or age." American society has, most recently, been willing to accept the limitations of medicine and therefore been willing to allow death to occur without CPR.

Shelley demonstrated that nurses are usually slower to respond when caring for patients with DNR orders compared to healthy patients. For example, nurses were less likely to answer call lights for DNR patients when compared to healthy patients. If nurse anesthetists demonstrate this behavior during the perioperative period, this type of care may be construed as active euthanasia, compounding a medicolegal dilemma.

The objective of the anesthetist when attending a DNR patient is to support patient autonomy, allow patient participation in his or her healthcare, provide a safe anesthetic, and attain a good anesthetic outcome. When discussing with the patient decisions relating to DNR, bias of the healthcare team should be excluded. Then, if the DNR order is rescinded during the perioperative period, the negotiated suspension should be based upon the patient's desires and requests and not the desires of the CRNA or the healthcare team.

In the event an irreversible catastrophic event occurs during the perioperative period, the continuation of supportive efforts should be discussed with the patient and the family. While the authors support the decision to rescind the DNR orders during anesthesia, the decision should be tailored to the unique needs of each individual. There is no single standard or rule that is all-inclusive in the management of the DNR patient. Rigid policies and inflexible strategies only restrict the options open to the CRNA and the patient.

Delegation of the decision to suspend DNR is sometimes relegated to the healthcare team. In such instances, it may be inappropriate to ask the patient's guidance and increase his or her participation in the decision. An interview with family members and the counsel of experienced ethicists may provide important information on which to base a final decision. The anesthetist should remain flexible, increasing the options of care for patients and their families, while making such a serious and deliberate decision.

REFERENCES


AUTHORS

Gary D. Clark, CRNA, MS, earned a diploma from St. Joseph's School of Nursing, Alton, Illinois, in 1969; a Certificate in Anesthesia from Truman Medical Center, Kansas City, Missouri, in 1972; a bachelor of arts degree from Ottawa University, Ottawa, Kansas, in 1981; and a master of science degree from Southern Illinois University, Edwardsville, in 1985. Mr. Clark is currently a doctoral candidate at Nova University, Fort Lauderdale, Florida. He has served as instructor of nurse anesthesia at Washington University School of Nurse Anesthesia, St. Louis, Missouri, since 1986.

Karen Lucas, CRNA, BSN, obtained a bachelor of science degree in Nursing from Central Missouri State University, Warrensburg, Missouri, in 1984. She graduated from Washington University School of Nurse Anesthesia in 1993.

Larry Stephens, CRNA, BSN, received a bachelor of science degree in Nursing from the University of Tennessee, Memphis, Tennessee, in 1989. He graduated from Washington University School of Nurse Anesthesia in 1993.