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**NURSES' ATTITUDES CONCERNING THE APPROPRIATENESS
OF DO NOT RESUSCITATE (DNR) ORDERS**

**A Thesis
Presented for the
Master of Science in Nursing
Degree
The University of Tennessee, Knoxville**

Shirley Ann Reinemeyer

December 1987

DEDICATION

Dedicated to

My Father,

for teaching me the value of hard work,

My Mother,

for helping me to see the good in myself and others,

My Husband,

for his love and support,

My Children,

for the laughter and joy

they bring to my life.

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A special thanks to my husband, children and family for their enduring love and continued support.

ABSTRACT

The purpose of this descriptive study was to examine the influence of various patient factors on nurses' attitudes concerning the appropriateness of "Do Not Resuscitate" (DNR) orders. The subjects were 149 registered staff nurses employed at 2 medical centers in Knoxville, Tennessee.

Nurses' attitudes were examined by their responses to paired clinical vignettes. Each pair of vignettes contained comparable clinical information with the exception of a single factor that potentially could influence a decision to withhold CPR. A Likert Scale was utilized for all vignettes to measure attitudes concerning the appropriateness of a DNR order.

The instruments used in this study included the Job Involvement Scale (Lodahl & Kejner, 1965), the DNR Questionnaire (Farber, Bowman, Major & Green, 1984), and a demographic questionnaire developed by the researcher. Statistical analyses included paired t -tests, Repeated Measures Analysis of Variance (a General Linear Model was used for unbalanced designs), and the Tukey's Studentized Range Test. Frequency distributions and measures of central tendency were also calculated.

The results of this study indicated that the age of the patient had a significant influence ($P \leq 0.05$) on

nurses' attitudes toward a DNR order. As the age of the patient in the vignettes increased, the respondent was more likely to agree with a DNR order. The study also found that DNR orders were considered appropriate for residents of nursing homes, and patients with terminal cancer and dementia secondary to Alzheimer's disease.

The patient factor of drug dependence did not increase the acceptance of a DNR order. Demographic and psychosocial characteristics of the nurse did not influence DNR acceptance.

This study demonstrated that a patient's mental status, and biomedical and psychosocial factors had a significant impact ($P \leq 0.05$) on nurses' attitudes toward a DNR order and its appropriateness for a particular patient. Implications for nursing interventions and for future research were discussed.

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CHAPTER I

INTRODUCTION

Advances in medical technology over the past 20 years have created situations in which patients with terminal illness must make difficult decisions concerning the nature of their death. Dying, hospitalized patients are frequently subjected to the use of sophisticated machinery and instrumentation to sustain life. Such biomedical developments have rendered death more a matter of deliberate decision than one of natural occurrence (President's Commission, 1983). The increasing appearance of 'do not resuscitate' (DNR) orders is a direct result of the technological age in which we live.

The evolution of technology has resulted in the increased success and use of cardiopulmonary resuscitation (CPR) (Fox & Hipton, 1983; Gillick, 1980; Witte, 1984). Consequently, CPR has become a routine procedure in the event of cardiac or pulmonary arrest. Health care professionals view the universal application of resuscitative measures with growing concern, and have questioned the appropriateness of resuscitation for certain individuals (Miles, Cranford, & Schultz, 1982; Rabkin, Gillerman, & Rice, 1976).

Grave moral and ethical issues are associated with the discretionary application of resuscitation and/or the cessation of medical intervention (Gillick, 1980). A dilemma arises for health care professionals when the opposing philosophies of preservation of life and acceptance of the inevitability of death are weighed. Medical technology does not alter the inevitability of death, but does alter the timing, the circumstances and the actual precipitant of death (Gillick). While an individual's death may be postponed, the life preserved may be one of total incapacitation.

The availability of advanced technology to sustain life complicates the determination of when the patient is actually dying (Thompson & Thompson, 1981). Ambiguity over criteria which constitute the physiological state of dying further complicates the issue of selective resuscitation.

It has become necessary to differentiate patients who may benefit from CPR from those who may not. The DNR order is an attempt to use CPR more discriminately and thereby meet the individual needs and wishes of the patient. Hospital policies for DNR orders attempt to ensure that no one dies unnecessarily while permitting terminally ill patients to die in comfort and with dignity (Curtin, 1979). The aim of DNR policies is to provide a method to

distinguish between those who enter the hospital to die and those who enter to recover (Shelley, Zahorchak, & Gambrill, 1987).

A decision not to resuscitate in certain conditions has been shown to be acceptable to health care providers. It is generally agreed that cardiopulmonary resuscitation should be withheld in some patients with severe, chronic, progressive, end-stage disease that is irreversible (Farber, Bowman, Major, & Green, 1984). While conditions with grave prognoses have been used traditionally as criteria, non-medical patient factors also have been linked to the perceived appropriateness of a DNR order. Non-medical patient factors such as age, mental status and socioeconomic background have been shown to influence significantly the decision making process of both physicians and nurses to withhold or initiate CPR (Farber et al., 1985). The degree to which non-medical factors should influence the resuscitative decision remains controversial.

According to Witte (1984), the individual most aware of the patient's feelings concerning death is the nurse. Nurses provide the majority of care for the aged and dying patients in hospitals. As a result, the nurse becomes intimately involved in resuscitative decisions (Hopping, 1977; Yarling & McElmurry, 1983). Nurses working with

patients who do not appear to benefit from ongoing life support therapy are often the first to verbalize concern for the patients to the attending physician (Thompson & Thompson, 1981). This information has the potential to influence the manner in which the terminally ill patient dies.

The criteria used by nurses to support or oppose the DNR status for particular patients have not been documented thoroughly. Presently, it is difficult to ascertain which patient characteristics may influence decisions made by nurses to support the legitimacy of DNR orders. Closer scrutiny of both medical and non-medical criteria and their influences on nurses' attitudes is needed.

Statement of Problem

The criteria for 'do not resuscitate' orders remain obscure and controversial despite efforts by health care professionals to create guidelines for the designation of the DNR status. Standards for DNR orders are peculiar to institutions, and guidelines often vary in their specificity (Dolan, 1984; Miles et al., 1982). Nurses, who bear the major responsibility for the care of the dying patient, are frequently in the position to resuscitate a patient or to acquiesce to the patient's death (Curtin & Flaherty, 1982). Without specific guidelines, the nurse is

asked to make a judgment concerning resuscitative measures for the terminally ill patient. Very little is known about the criteria or patient factors utilized by the nurse to support this decision (Thompson & Thompson, 1981).

Purpose_of_Study

The purpose of this study was to determine whether certain patient factors influenced nurses' attitudes toward the appropriateness of a DNR order for a particular patient. This investigation utilized 13 patient factors which had been used previously in a study by Farber et al. (1985) to determine the possible influence on the decision-making process to withhold CPR. In addition, associations between demographic and psychosocial characteristics of nurses and their responses to a particular patient factor were explored.

The_Research_Question

What patient factors influence nurses' attitudes concerning the appropriateness of a DNR order?

Subsidiary Questions

1. Are nurses' attitudes concerning the appropriateness of a DNR order influenced by demographic characteristics of the patient, such as age and living situation?

2. Are nurses' attitudes concerning the appropriateness of a DNR order influenced by the diagnosis of terminal cancer and drug dependence?

3. Are nurses' attitudes concerning the appropriateness of a DNR order influenced by a history of dementia secondary to Alzheimer's disease?

4. Are responses to certain patient factors correlated with demographic characteristics of the nurse, such as age, clinical specialty, years of clinical experience and highest nursing degree obtained?

5. Are certain psychosocial characteristics of the nurse, such as previous experience with family and patient deaths, amount of exposure to DNR orders, and the degree of religious influence in daily life, associated with responses to certain patient factors?

Nominal Definitions

Appropriateness of a DNR Order: In the context of this study, the word appropriate is used to designate a

participant's agreement with the decision to implement a DNR order.

Attitudes: The predispositions of an individual to evaluate some symbol or object or aspect of his world in a favorable or unfavorable manner (Halloran, 1967).

Death With Dignity: The wishes of the dying patient are solicited and respected (President's Commission, 1983).

Dilemma: "The choice between equally undesirable alternatives" (Curtin & Flaherty, 1982).

DNR Order: A physician's order, written on the patient's chart, which designates that no cardiopulmonary resuscitative measures will be initiated in the event of acute cardiac or respiratory arrest.

DNR Status: The resuscitative rating that indicates that no cardiopulmonary resuscitation is to be used in the event of cardiac or pulmonary arrest.

Extraordinary Means: Those technological methods which cause an undue burden on the patient and his family if instituted by care givers (President's Commission, 1983).

Medical Technology: The use of sophisticated equipment and compounds to diagnose and treat a patient's illness.

Patient_Factors: Characteristics of patients which included: (a) demographic data such as age, sex, marital status, and place of residence, (b) psychosocial data such as mental status, number of suicide attempts and history of violent crimes, and (c) physiologic data including diagnosis of terminal cancer, alcoholism and drug abuse.

Religious_Influence: The degree to which beliefs of a spiritual nature influence the respondent's daily life.

Resuscitative_Measures: The methods used to return an individual to a state of consciousness after a pulmonary or cardiac arrest (President's Commission, 1983). These include but are not limited to chest compression and mechanical ventilation of the lungs.

Specialty_Area: The field of nursing in which the respondent possesses a degree of expertise.

Terminal_Illness: The end-stage of a disease in which recovery is improbable and the death of the individual is expected.

Summary

Chapter I described the research problem, the need for the study, and the purpose of the study. The research question, subsidiary questions, and definition of terms were also presented. Advancements in medical technology have resulted in the increased use of cardiopulmonary

resuscitation. There is growing concern over the universal application of resuscitative measures. Previous research has shown that medical and non-medical patient factors influence the resuscitative decision. This study was conducted to investigate the influence of certain patient factors on nurses' attitudes concerning the appropriateness of a DNR order.

CHAPTER II

REVIEW OF LITERATURE

This chapter presents a limited review of the literature concerning the effects of medical technology on health care, a historical perspective of resuscitation, and the complexities and ethical implications of the DNR decision. Both theoretical and empirical literature on the demographic, physiological and psychosocial characteristics of the patient and nurse relative to the DNR issue are discussed.

Effect of Medical Technology on Health Care

Ambiguity surrounds the resuscitative issue despite the efforts of physicians, nurses, ethics committees, and the general public to prepare guidelines and procedures for implementing DNR orders. Scientific advances have multiplied the options for health care, yet the wise allocation of technological methods remains an issue of great debate. While technological advances in health care have increased longevity and improved the general state of health for Americans, there also has been a reevaluation of the hazards which accompany overindulgence in the use of technological methods (President's Commission, 1983). Health care professionals and the public are concerned that

individuals may be kept alive indefinitely in a vegetative state (Gillick, 1980). The cost of health care and the use of limited resources are judged to be excessive (Lo & Jonsen, 1980). Yet the fascination for technology in the field of health care continues despite pleas to reevaluate the primary goals of health professionals. Davis (1981) implies that the greatest danger of scientific advancement in health care is infatuation with technology at the expense of humanity.

Medical technology and its capabilities have out-distanced professional, legal and ethical readiness to dispense the available resources wisely. The goals of medical treatment, as well as the process of dying, are vitally affected by technological advances (Lippincott, 1979). An unyielding commitment to the preservation of life justifies the prolongation of organ function without necessarily returning an individual to a tolerable state of well-being and enjoyment of life (Gillick, 1980). Decisions regarding the welfare of the patient are increasingly complex, and the responsibilities of all health care professionals are enlarged as sophisticated instrumentation is used to sustain the life of critically ill patients.

With the growing complexity of life and death issues, the demand for greater precision in decision-making arises

(Langham, 1977). In order to determine the best course of action for a particular patient, factual information is discriminately weighed. Such deliberation reflects thoughtful and sensitive considerations based on principles rather than on a "gut" feeling or unquestioning obedience to a higher authority (Davis & Aroskar, 1983).

Optimal care for the terminally ill patient should not be confused with maximal treatment (Curtin, 1979). The humane use of technology encompasses the application of knowledge gleaned through research and growing technological skills for the greatest benefit of the patient. As Curtin (1979) suggested, it is far more useful to provide a clear statement of rational and humane care than simply to make ad hoc pleas for compassion. Such policies begin to lay the groundwork for compassionate and wise application of medical technology.

Historical Perspective

Historically, cardiopulmonary resuscitation was used for otherwise healthy individuals whose heartbeat and breathing had failed following surgery or near-drowning (President's Commission, 1983). The intent was to use resuscitation as an emergency treatment to restart the heart after a traumatic insult (Dolan, 1984). CPR

virtually was limited to patients who were expected to recover and resume their previous levels of function.

The attitudes of health professionals changed as resuscitative measures became increasingly successful and sophisticated. CPR became a reflexive effort to ward off death for all patients (President's Commission, 1983). It was presumed that the greater good resulted from the extension of life, even for brief periods and under conditions of substantial disability and suffering (Mappes & Zembaty, 1986).

The use of technological means to preserve life is standard practice when no advance decision concerning the matter of resuscitation has been made (President's Commission, 1983). In such cases, the decision to resuscitate may be based on medicolegal concerns rather than the patient's welfare (Dolan, 1984). According to Evans (1981), physicians prefer to enter the diagnoses and poor prognoses in the patient's progress notes, yet record no specific order regarding the patient's resuscitative status in the chart. This places the ultimate decision in the hands of the care giver at the moment of the patient's death. The outcome for the patient depends on the ability of the health professional to weigh multiple factors at a moment's notice. It is doubtful that the best possible judgment can be made under such circumstances.

In the mid-1970's, legislation appeared in many states to legalize the advanced decision not to resuscitate an individual (Gillick, 1980). Written orders to withhold cardiopulmonary resuscitation began to appear on the patient's chart. Natural death statutes were passed to provide a means for individuals, while they were competent, to direct the kind of treatment desired at the end of their lives (Bandman & Bandman, 1985). Legalization of the "living will" (i.e. a document prepared by individuals prior to acute illness that indicates their wishes in the event of death) in many states affirmed an individual's right to decide the nature of his death. The living will has become a safeguard for the dying patient, and prevents interruption of the natural process of dying (Fox & Hipton, 1983).

The concept of "death with dignity" is currently gaining acceptance (Davis & Aroskar, 1983). Terminally ill patients learn to live while dying and actively participate in decisions not to use medical resources which do not promote a cure. The proliferation of the hospice movement, as well as the enactment of hospice reimbursement legislation, are public acknowledgements of an alternative to extending life through technological methods. The establishment of ethics committees in health care institutions affirms that the relief of suffering rather

than the preservation of life is the greater moral obligation in some cases (Lo & Jonsen, 1980).

Complexity of the DNR Issue

Structure of the Health Care System

The structure of the health care delivery system enhances the complexity of the DNR issue. Admission to a hospital largely dictates the type and extent of patient care which is delivered in accordance with the philosophical view of the institution. The preservation of life and promotion of health are two primary goals of hospital-based care (President's Commission, 1983). The standard of medical care and the general policy of hospitals is to act affirmatively to preserve the life of all patients, including persons who suffer from irreversible terminal illness (Rabkin et al., 1976).

Whether the means to prolong an individual's life are considered to be extraordinary is relative to the technological methods available at an institution (Bandman & Bandman, 1985). A community hospital frequently views the issue of resuscitation differently than a large metropolitan teaching hospital with the latest available technology (Pearlman, Inui, & Carter, 1982). Patients are less likely to be resuscitated in a socialized medical system, such as the one currently operative in England.

Institutional policies regarding DNR orders reflect these differences, and the care offered to terminally ill patients is consequently diverse.

Resuscitative Questions

An element of incertitude is always present when considering the issue of resuscitation. Varying degrees of uncertainty are inherent in the diagnosis and prognosis of a disease. While death for a terminally ill patient may be expected, his dying follows no regular course (President's Commission, 1983). The decision of resuscibility includes weighing both objective and subjective criteria. Gillick (1980) stated that conflict arises from strong personal and professional commitments to the following two questions: (a) Which patient factors should contribute significantly to the decision of resuscibility? (b) Who should bear the major responsibility for the DNR decision?

The irreversibility of a disease is not the basis for a DNR order, but rather a precondition of that decision (Yarling & McElmurry, 1983). Medical data must exist to verify the terminal state of the patient's condition before the DNR issue is considered. The expectation of death and the futility of treatment are the cardinal criteria used for the designation of the DNR status.

A court ruling in the case of Joe Saikewicz supported the previous criteria in the decision to withhold chemo-

therapy from a 60-year-old mentally retarded man who developed acute myelogenous leukemia. It was felt that extraordinary means should not be used to prolong life when, after careful consideration and the application of well-conceived therapy, it became apparent that no hope of recovery existed (Curran, 1978). The court reaffirmed the legitimacy of DNR orders in the case of Shirley Dinnerstein, a 67-year-old woman with Alzheimer's disease who had been hospitalized for a stroke. Again, it was ruled that withholding life support therapy was appropriate for irreversibly ill patients who suffer a cardiac or respiratory arrest (Schram, Kane, & Roble, 1978).

The most widely accepted criterion for DNR status is the presence of a lethal disease for which medical treatment only prolongs suffering and the dying process. Other criteria have been used to support a DNR decision, including: (a) a request by the patient and family to forgo life sustaining treatment, (b) the advanced age of the patient, (c) severe brain damage, and (d) enormous cost and personnel commitments compared to the low probability of patient recovery (Lo & Jonsen, 1980; Miles et al., 1982).

Most health care professionals agree that there is a time to cease prolonging life and to concentrate on the needs of the dying person and provide a peaceful death

(Weber, 1973). The question remains as to who bears the major responsibility for the resuscitative decision. Conflicting views are presented in both the medical and nursing literature.

Yarling and McElmurry (1983) stated that the DNR decision is based on moral considerations such as the value of life, the quality of life under the given circumstances, and the acceptance or denial of the imminence of death by the patient. They elaborated by saying that since the decision is a moral and not a medical one, the patient is the only person who can determine the appropriateness of the DNR order. While other sources strongly recommended the participation of the patient in the resuscitative decision, limitations such as time constraints and lack of available information were recognized (Gillick, 1980; President's Commission, 1983).

Although many physicians agreed that patients and their families should participate in the resuscitative decision, it was found that physicians talked infrequently with patients about resuscitation (Bedell & Delbanco, 1984). It was also found that physicians were likely to form opinions about the patient's attitudes toward CPR without consulting with the patient. Physicians stated that they did not wish to impose unnecessary guilt upon the patient and family. Another reason offered for the

physician's unilateral decision was the belief that medical care is so intricate that patients and families cannot fully comprehend the basis for a DNR decision, and therefore their contributions are of questionable value (Farber et al., 1984).

The legal system of the United States has shared the burden of the resuscitative decision. Court rulings reflect the controversy over the issue of propriety of the DNR decision. In the Karen Quinlan case, the Superior Court of New Jersey (1978) declared that the responsibility for determining the nature, extent and duration of care belonged to the physician. The U.S. Supreme Court overturned the ruling and stated that the gravity of the DNR decision demanded that a committee of qualified persons decide the issue of resuscitation. In the Joe Saikewicz case, however, it was concluded that competent, terminally ill patients or their surrogates can rightly ask that CPR not be used to prolong life (Curran, 1978).

Ethicists believe that the patient is the only person who can accurately assess his/her quality of life and therefore must participate in the decision to forgo life sustaining and resuscitative measures (Gillick, 1980). The power to adjudicate over life and death needs to be shared by a group of individuals interested in the welfare of the patient. Nurses, religious advisers, and family members

may be in a better position to decide the appropriateness of a DNR order than a physician, because of their close contact with patient and family (Mappes & Zembaty, 1986). The contributions of a team of professionals in the resuscitative decision are invaluable. Decisions not to resuscitate demand participatory preparation, prior consultation, communication and deliberate thought among all people involved (Curtin & Flaherty, 1982).

Implications for Care

The variability in the care of DNR patients comprises a source of great confusion for health care professionals and the public. The care of patients for whom DNR orders have been written can vary along a continuum from one extreme to another. One extreme view is that, with the exception of CPR, all medical and nursing interventions should be initiated and continued for DNR patients. The other is that DNR patients should be allowed to die quietly and with dignity, but without medical interventions (Lewandowski, Daly, McClish, Juknialis, & Youngner, 1985). The continuum exemplifies the range of emotional responses regarding the care of the DNR patient. Some health professionals feel that comfort measures alone are appropriate for the DNR patient, while others feel that the denial of life sustaining interventions is a form of abandonment (Miles et al., 1982).

Withholding medical therapy is not synonymous for withholding care. It means that the focus of care is directed to the details of terminal care to make the dying patient feel comfortable, cared for, and accepted (Lo & Jonsen, 1980).

Empirical data support the contention that care continues after the designation of a DNR status. It was found that a DNR order for a patient did not alter the amount of nursing care given, and had virtually no impact on the physical dependency needs identified by nurses in an intensive care setting (Lewandowski et al., 1985). DNR patients admitted to an intensive care unit often received life sustaining interventions such as vasoactive drugs, antiarrhythmics, intravenous antibiotics, and mechanical ventilation (Youngner, Lewandowski, Juknialis, Coulton, and Bartlett, 1985). DNR orders do not imply a change in clinical procedures but simply direct that cardiopulmonary resuscitation will not be attempted in the event of the patient's cardiac or respiratory arrest. The DNR status is compatible with maximal and aggressive medical care and does not indicate that current treatment will be withdrawn or that additional therapy will not be initiated (Miles et al., 1982).

Ethical_Dimensions_of_DNR_Orders

Ethical_Views

Complex issues require the use of an analytical process in which pertinent facts are identified among available data. All health professionals involved in the care of the terminally ill are encouraged to examine their values in a systematic way. This process is the basis for ethical inquiry and promotes principled reasoning (Crisham, 1981). A reasoning approach based on the just application of a set of principles or values promotes rational decision-making that protects the welfare of the patient (Taylor, 1985).

Davis and Aroskar (1983) indicate that there are three ethical points of view which relate to the issue of resuscitation. Each view is discussed briefly below.

1. New morality is a view which places human and personal integrity above biologic life and functions. It is believed that the core of humanity lies in cerebral function and the ability to make rational decisions. This view supports withholding resuscitative measures in the case of a terminally ill patient because it preserves the dignity of the individual.

2. Proportionate good is a view which advocates weighing the benefits of an action against the harm it may cause a terminally ill patient. This view supports the

idea that some lives are not worth living as judged by the individual and is the basis for the quality-of-life ethic.

3. Ethic of benemortasia refers to good or kind death. This ethical view is concerned with how health care providers carry out their obligations to the terminally ill patient. Mercy is considered a moral obligation which advocates the relief of an individual's suffering. The fundamental principle of this view is respect for the patient as an individual.

Each view represents a different principle which supports the selective use of resuscitative measures. These ethical principles appeal to a logical comprehensiveness, universality and consistency which are applicable to a variety of situations. Principled reasoning which is based on ethical inquiry guides physicians and nurses in the decision-making process (Mayberry, 1986). Judgments which incorporate one of the previously mentioned views reflect ethical and compassionate considerations rather than acting in conjunction with policies and/or past experiences.

Individual Rights

Closely tied with the issue of withholding life sustaining treatment are the fundamental rights of an individual. The right of privacy forms the basis for the right of self-determination and informed consent.

Individuals are free to choose their own course in life as well as in dying. It is the responsibility of health care professionals to provide the information needed to make an informed decision.

Justice is a concept which supports the idea of equality and reciprocity in human relations (Crisham, 1981). This means that the unique features of individuals are considered, and that they are equal to every other individual in possessing fundamental rights. Justice is the basis for the belief that the wishes of every individual should be impartially considered (Davis & Aroskar, 1983). It is the principle which supports the fair and equal distribution of resources.

Bandman and Bandman (1985) identified three basic rights of the dying patient which form the basis for deciding medical treatment and nursing care. The trilogy of rights are the following:

1. Right to respect. Each person deserves to be treated with dignity and recognition of the inherent worth of the individual as uncompromisable. This right includes the prerogative to know the truth and to be told the truth by those in charge of his/her care.

2. Right to treatment. Each person has a right to expect treatment which may include custodial, palliative

and/or aggressive measures depending on the wishes of the patient and treatment available.

3. Right to refuse. Each person has a right to have his wishes honored without the fear of abandonment. The patient's consent to die should evoke agreement among care givers and provoke deliberation on how best to care for the patient.

The freedom and dignity of an individual require that he has control over his own life, including the way in which he dies (Gillick, 1980). Respect for a patient's autonomy is the axiom that supports the belief that the patient should be the central figure in the decision concerning resuscitation. An increased awareness of patients' rights to be treated in accordance with their wishes and expectations requires that the use of resuscitative measures be justified by adherence to sound medical practice, and by the patient's right to elect or decline the benefits of medical technology (Rabkin et al., 1976).

The patient's inability or lack of freedom to exercise a right does not negate the existence of that right (Curtin & Flaherty, 1982). It does, however, place a responsibility on health care providers and family members to assist the patient to execute his rights. The patient who is incompetent presents a challenge to the health care

team to determine the most humane treatment that represents the patient's wishes. It is essential, when deciding the welfare of another human being, to support decisions with reasoned principles.

Sanctity-of-Life Principle

Most health care professionals hold views about the nature of man that incorporate the intrinsic value of human life. The sanctity-of-life principle historically has been the single most basic and normative concept in ethics (Davis & Aroskar, 1983). This principle is used to represent the inherent holiness and value of human existence, because of its relationship to a spiritual being (Taylor, 1985).

The sanctity-of-life principle is an objective, absolute value of human life that insists all life is worthy of respect and protection. This statement implies that life must be preserved at all costs in all situations. It is the strongest argument against DNR orders. Halloran (1982) suggested that a reverence for life and an acceptance of death may coexist. She stated that reverence for life holds the belief that human life is important and a basic right. The acceptance of death is not a denouncement of the basic right to life, but an acknowledgement of the finality of life.

Quality-of-Life Principle

The quality-of-life principle (QOL) is a more recent ethical view that emerged as technical capabilities increased (Davis, 1981). It attempts to evaluate the caliber of life that an individual currently possesses. A decision regarding medical treatment for a patient based on QOL tries to determine the perceived worth or value of life for that individual.

The QOL principle makes it necessary to define functions and capacities which are essential features of human nature. The absence of these features would indicate less than human existence (Gillick, 1980). Pope Pius XII stated that the meaning and substance of life is found in human relationships which express the human capacity for justice, respect, and compassion (McCormick, 1974). Life is the ability to engage in social interactions and when all energies are expended to maintain life instead of relationships, death should be accepted (Halloran, 1982). These authors agree that prolonging life by medical treatment only to preserve the existence of the patient is a state worse than death.

Calman (1984) stated that QOL measures the differences at a particular moment in time between the hopes and expectations of an individual and that individual's present experience. A good quality of life is present when the

hopes of an individual are matched and fulfilled by his living experience. A poor quality of life occurs when hopes far exceed what the individual is presently experiencing. Therefore, QOL is a relative measurement of the experience of life which varies throughout the lifespan of the individual.

A classic argument against QOL is its subjective nature, which makes it difficult to define and measure operationally. Further opposition is based on the expected fluctuations between aspirations and accomplishments in an individual's life. It would be difficult to distinguish between a patient's state of despair versus a settled resolution to die. As Bandman (1978) suggested, the greatest difficulty for the dying patient who consents to his own death is persuading the living that the consent is genuine.

It is critical that the quality-of-life principle not be confused with the value of life, because each person has an equal and inalienable right to life regardless of mental or physical condition (Miles et al., 1982). The QOL principle offers a way for health professionals to verify the patient's perception of his life. It provides a method to estimate the gap between present experiences and the patient's expectations of his life. In this sense, the QOL principle becomes a valuable tool in the resuscitative

decision when it reflects the patient's values and perceived worth of life.

In conclusion, the quality of life of an individual can only be described and measured in individual terms and depends on present lifestyle, past experience, hopes for the future, dreams and ambitions (Calman, 1984). QOL emphasizes personal growth, satisfaction and contentment of life. It is a popular concept and provides a basis for the exploration of the resuscitative decision with the patient.

Selective Patient/Nurse Factors

Research Related to Patient Factors and DNR Decisions

A decision to withhold resuscitation in certain conditions has been shown to be acceptable to health care givers. Little is known, however, about the patients who are assigned to the DNR group. The limited numbers of studies which have concentrated on distinguishing the criteria used to support the DNR decision have presented conflicting results.

Conditions with grave prognoses have been used traditionally as criteria for a DNR order (Farber et al., 1984). A medical diagnosis of terminal, end-stage disease was the most prevalent reason cited by physicians for a DNR order for patients in an intensive care unit. The severity of illness and the impact on a patient's quality of life

were shown to be the most important predictors for DNR designation (Youngner et al., 1985). Concomitantly, a low probability of recovery or chance of leaving the hospital were associated with the DNR group in an intensive care unit. Seventy-seven percent of those designated as DNR status died in the MICU as compared to 17% of the total patient population of the MICU. It was found that the DNR group also had a history of serious illness or chronic incapacitating illness 3 to 6 months prior to hospitalization (Lewandowski et al., 1985).

Non-medical factors also have been linked to the perceived appropriateness of a DNR order. Patient factors such as age, mental status, life style and socioeconomic background have been shown to influence significantly the decision making process by physicians and nurses to withhold or initiate CPR (Farber et al., 1985). Patient vignettes were used to elicit responses that were based on patient factors other than medical criteria. Both physicians and nurses recommended that CPR be withheld for patients who were elderly, had multiple suicide attempts, had committed violent crimes, lacked a support system, and suffered from dementia or mental retardation.

The most controversial patient factor found to influence the DNR decision is age. It is believed that the most expensive activity of sophisticated technology is to

support the life of elderly and disabled (Pearlman et al., 1982). MacDonell (1981) stated that many health care professionals consider the elderly as "bed blockers" in acute care institutions and that their problems constitute expected decrepitude and do not warrant vigorous medical intervention. He elaborated, saying that such ideas are based on misconceptions which ignore the fact that most elderly are remarkably healthy.

However, evidence remains that age significantly influences health care providers' attitudes concerning the DNR decision. In a prospective study of 231 patients in an intensive care unit, the DNR group was older than the non-DNR seriously ill group (Lewandowski et al., 1985). The ages of 32, 64 and 98 were used in patient vignettes in which all other patient information was identical. It was found that the likelihood of resuscitation was significantly decreased for the ages of 64 and 98 (Farber et al., 1984). It was also found that advanced age significantly influenced attitudes of nursing students and intensive care nurses toward less aggressive care for the elderly patient (Shelley et al., 1987).

An interesting trend was found during a survey of 78 emergency (ER) medicine physicians. When age was used as the sole criterion to cease CPR in the emergency room, 4% responded that they would stop CPR if the patient were more

than 65 years old, 9% would stop if the age were increased to 75 years (Chipman, Adelman, & Sexton, 1981).

A retrospective review of 100 charts of patients who had died in an intensive care unit found data which were contrary to the previous findings. In a comparison between DNR patients and a resuscitated group of patients, age was not a significant factor (Witte, 1984). In a survey of patients who had undergone CPR, age was not found to influence the chances of survival after resuscitation. The factor which most influenced chances of survival was a high level of activity by the patient prior to hospitalization (Bedell, Delbanco, Cook, & Epstein, 1983).

Patients designated as DNR status tend to have depressed neurological status, frequently to the level of unconsciousness (Witte, 1984). A decline in mental status was found to decrease the likelihood of resuscitation by physicians and nurses (Farber et al., 1985). This finding is supported by Chipman et al., (1981) who found that 54% of ER physicians surveyed would cease resuscitation if the patient had severe mental impairment, such as mental retardation or senile dementia.

It also was found that knowledge of a patient's place of residence influenced the resuscitative decision. Patients from nursing homes were less likely to be resuscitated (Chipman et al., 1981).

Causes of death have changed dramatically since the beginning of this century. Communicable diseases have declined sharply, while chronic, degenerative conditions such as heart disease, cancer, and cerebrovascular disease are dominant (President's Commission, 1983).

Consequently, those facing death are more likely to be aged and to be suffering from one or more ailments. It is often the older adult who is in need of intensive care services, but may be denied treatment in favor of a younger patient with "more potential" for life (Thompson & Thompson, 1981).

As equal distribution of care resources becomes more difficult, attitudes of physicians and nurses toward the elderly, ill population will have a great impact on their welfare. Although authors recommend that age alone not be used as a criterion for the DNR decision, studies indicate that an association exists between advanced age and DNR status. It is important to identify the specific factors which have an influence on the DNR decision. Such knowledge may assist both physicians and nurses to make decisions which represent the wishes of the patient and reflect a conscious effort to protect the welfare of the patient.

Research Related to Nurse Characteristics and DNR Decision

The nurse is the member of the health care team most often present at the time of a patient's death. It is

almost inevitably the nurse who carries out the DNR order by deliberate inaction (Yarling & McElmurry, 1983). Nurses face decisions and make judgments concerning nursing practice which invariably include decisions about the appropriateness of a DNR order. The final decision evolves from a problem-solving process which is inherently laden with the value commitments of the nurse (Crisham, 1981).

Limited research has been done on the ethical decision-making process of nurses. A review of the literature revealed that nurses often use an intuitive approach to ethical problem solving which does not involve the process of critical inquiry (Langham, 1977; Mayberry, 1986). A study in which 70 registered nurses were presented with an ethical dilemma confirmed the traditional nursing values of adhering to physician authority and protocol. Patient rights and wishes were equally endorsed by the nurses. The group of nurses was equally divided over the legitimate role of the nurse as an independent decision-maker and whether the nurse has a right to make ethical decisions (Lawrence & Farr, 1982). It was suggested that nurses reacted in traditional ways because they believed that moral duty was synonymous with obeying doctor's orders (Andrews & Hutchinson, 1981).

All nurses face ethical dilemmas regardless of their job description and practice setting. Nurses make

judgments about ethics whether they are aware of it or not (Lawrence & Farr, 1982). Research studies are beginning to link psychosocial and demographic characteristics of nurses with principled reasoning.

The most powerful and consistent correlate of principled or higher level thinking is level of education. The number of years spent in formal education was positively correlated with higher levels of principled thinking in a study by Mayberry (1986). A sample of registered nurses from three medical centers was asked to complete the Watson-Glaser Critical Thinking Appraisal Test and the Rest's Defining Issues Test. Scores indicated that nurses with a baccalaureate education achieved more advanced levels of critical thinking and moral reasoning than nurses who had received technical nursing preparation.

In a study conducted by Crisham (1981), three groups of nurses, prepared at the associate degree, baccalaureate and master's levels were asked to respond to questionnaires specifically designed to measure nurses' responses to nursing dilemmas. The Nursing Dilemma Test (NDT) and the Defining Issues Test (DIT) were used. The highest scores for both questionnaires, indicating a high level of moral development, were positively correlated with level of education. Shelley et al., (1987) reported that graduate MSN students agreed less strongly with aggressive care for

a patient with a DNR order than did senior BSN students. Unfortunately, this study had two confounding variables in the age of student nurses and previous nursing experience.

The age of the nurse and its possible relationship to ethical decision making is another demographic characteristic of interest. Crisham (1981) found that scores on the Nursing Dilemma Test or Defining Issues Test questionnaires were not correlated to age. No other empirical data were found to support or negate a correlation between age and the ethical decision-making process. It has been postulated by Kohlberg, however, that individuals develop moral reasoning in sequential stages which correlate with advancing age of the individual (Papalia & Olds, 1978).

Conflicting results concerning the influence of experience on principled reasoning were found in the literature. Mayberry (1986) found that nurses with fewer years in practice immediately following formal education had greater principled reasoning ability. It was suggested that as nurses grow older and gain more experience, they become imbued with administrative goals and develop loyalty to the institution and peers. Crisham (1981), however, found no consistent patterns when the scores of staff nurses with less than one year and more than 5 years' experience were compared. Further data are needed to draw

any conclusions about the influence of nursing experience upon decision-making in clinical situations.

Specialty areas within nursing generate distinct approaches in the nursing care of patients. The purpose of intensive care units is to maintain the biological function of an individual through the use of sophisticated instrumentation and machinery (Dolan, 1984). The primary objective for the care of the oncology patient in hospice is the promotion of comfort, which often excludes the use of technological interventions (President's Commission, 1983). The setting and corresponding treatment goal may dictate the actions initiated by the nurse in the event of a patient's death. However, no empirical data were found to associate the clinical specialty area with the decisions made by nurses in the care of dying patients.

The following additional characteristics of nurses and their correlations with the decision-making process were cited in literature:

1. Previous exposure to similar dilemmas. Nurses who had involvement with similar dilemmas in any context had higher scores on the moral judgment test. It appeared that previous deliberation enhanced principled thinking (Crisham, 1981).

2. Level of work pressure. A high level of work pressure is associated with a decreased ability to make

decisions and interferes with job performance. An increase in job satisfaction was related to increased levels of principled reasoning (Ketefian, 1987).

3. Experience with death. The nurse's experience with the death of a family member had a negative correlation on the Death Attitude Indicators Test. An experience with the death of a patient or friend had no association with scores regarding attitudes toward death (Hopping, 1977). Popoff (1975) reported that 20% of the nurses who responded to a survey felt that coping with the death of someone close (patient or family member) had positively influenced their attitude toward death and dying.

4. Spiritual beliefs. A significant difference in attitudes toward death was found between groups who believed in a supreme being and those who did not. Those who responded positively to a spiritual being had a more positive attitude toward death (Hopping, 1977). Popoff (1975) found that nurses whose religious beliefs strongly influenced their lives were less in favor of withholding treatment than nonreligious nurses. However, no significant correlation was found between religious beliefs of physicians and a tendency to withhold or initiate resuscitative measures (Pearlman et al., 1982).

Nurses make authoritative decisions which have the potential to influence greatly the lives of patients. It

is of the utmost importance that nurses establish standards of practice based on critical inquiry and ethical decision-making (Ketefian, 1987). With increasing participation on hospital ethics committees, nurses must be prepared to respond to ethical problems which affect the quality of existence for their patients (Mayberry, 1986). Nurses are obligated to practice in an ethical manner, but they need to develop skills in articulating an ethical position and engaging in ethical reasoning. One way of investigating a part of the decision-making processes of nurses is to determine the factors that are correlated with their responses to situations requiring a nursing judgment.

CHAPTER III

METHODOLOGY

Chapter III includes a description of the subjects, their selection, and the instruments utilized in this study. The details of data collection and analysis of data are presented.

Subjects

The subjects of this descriptive, exploratory study were 149 registered nurses employed at two medical centers in Knoxville, Tennessee. Each medical center was equally represented in the study. Nurses who worked in the following areas were invited to participate in the study: (a) adult intensive care unit, (b) step-down or telemetry unit (for patients who require close monitoring, but not intensive care), (c) emergency room, (d) oncology unit, or (e) medical-surgical unit. These clinical specialty areas were chosen because the researcher believed that nurses working therein would be exposed to DNR orders on a regular basis, yet to varying degrees. Also included in the study were subjects from the additional specialty areas of respiratory care, orthopedics, and dialysis. Each nursing unit that was invited to participate in the study agreed to do so.

Criteria for the selection of nurses included (a) current licensure as a registered nurse in the state of Tennessee, (b) current full-time or part-time employment as a staff nurse at the testing sites, and (c) a career in adult nursing. Nurses on all three shifts were represented in the study. Those functioning in an administrative capacity, such as directors of nursing, coordinators, or head nurses, were excluded from the study due to the investigator's expectation that a managerial role may foster attitudes toward DNR orders which differ from those of staff nurses.

Instrument

Three different instruments were utilized in this study. Information in the following areas was solicited: (a) current job involvement, (b) attitudes concerning the appropriateness of a DNR order for a particular patient, and (c) demographic and psychosocial characteristics of the nurse.

Job_Involvement_Scale

The present study utilized a job involvement scale developed by Lodahl and Kejner (1965) to determine the influence of work performance on an individual's self-esteem. This scale is comprised of 20 items which evaluate the following five factors: (a) current expectation of work,

(b) the degree to which a job is central to life interest (Saleh & Hosek, 1976), (c) a sense of duty toward work, (d) general ambition, and (e) the degree of negative involvement with work.

Lodahl and Kejner (1965) reported that the internal consistency coefficients for the 20-item scale ranged from 0.72 to 0.89. A split-half correlation was calculated on six items of the scale, and the Spearman-Brown formula indicated a reliability of 0.73 for the six items. Correlation between the 6-item total and the 20-item total was 0.87.

Lodahl and Kejner (1965) ascertained content and discriminant validity by distributing the questionnaire to different groups of nurses, engineers and graduate students. Responses were subjected to analysis of variance. Groups were found to differ significantly; the students had lower job involvement than nurses or engineers, who did not differ significantly.

Lounsbury and Hoopes (1986) utilized the job involvement scale to examine the effects of a vacation from work on job satisfaction and job involvement. A survey of 128 employees in technical, administrative, clerical and service positions was conducted one week prior and one week following the vacation period. The two investigators chose to test for the level of job

involvement as it is related to self-esteem and the central-life interest. The job involvement/central-life interest scale assessed the degree to which an individual's work role dominated other life roles. Alpha reliabilities for this variable were 0.91 (pre-vacation) and 0.93 (post-vacation). The job involvement/valued-self scale assessed the degree to which the individual associated job performance with self-worth (alpha = 0.72 pre-vacation and 0.73 post-vacation).

Ten items from the job involvement scale were utilized in the present study. The investigator elected to examine two aspects of the multi-dimensional construct of job involvement: job involvement as central life interest and importance of job performance to self-esteem. An individual is job-involved when: (a) work is a central-life interest, (b) performance is central to self-esteem, and (c) performance is perceived to be consistent with one's self concept (Saleh & Hosek, 1976).

Nurses were instructed to mark the responses which best described their feelings about their present job. Each response carried a weighted score ranging from five (indicating strong agreement) to one (indicating strong disagreement). The minimum and maximum possible scores were 10 and 50 points, respectively. For classification

purposes, a score of 35 points or greater was selected to designate a high degree of job involvement.

The 10 items comprising the job involvement scale appear in Appendix A.

DNR Questionnaire

The questionnaire utilized in this study was modified from one constructed by Farber et al. (1984). The questionnaire consisted of 26 paired, clinical vignettes. Each pair of vignettes contained comparable clinical information with the exception of a single factor that could potentially influence a decision to withhold CPR. The questionnaire contained a total of 13 patient factors related to the physiological, psychosocial, and demographic characteristics of the patient.

The questionnaire had been utilized in two separate studies to examine the influence of patient factors on the decision-making process of physicians (Farber et al., 1984) and physicians and nurses (Farber et al., 1985) to withhold CPR. The reliability and validity of the questionnaire had not been determined by the original investigators.

A pilot study was conducted by this investigator to ascertain the content validity of the questionnaire. Prior to the actual research study, samples of the questionnaire were distributed to students enrolled in the graduate

nursing program at the College of Nursing, University of Tennessee. Respondents voluntarily completed the forms and participated in an informal feedback session. A total of 15 graduate nursing students completed the forms and offered oral and written comments on the content of questions, the clarity of format and the adequacy of the rating scale. In response to the graduate students' suggestions, the following changes were made on the questionnaire: (a) the instructions for the DNR questionnaire were clarified, (b) employment status was added to the demographic questionnaire since the number of hours worked per week could influence responses on the job involvement scale, and (c) the sequence of questions on the demographic sheet was altered so that items followed logically.

The reliability of subject scoring was tested by incorporating two patient situations that were identical. The responses to each item were summed and compared to ascertain intrasubject agreement. Means were analyzed by the Student's t -test and found to be not significantly different.

The paired vignettes were distributed randomly throughout the questionnaire to minimize recognition of the patient factor being tested. All subjects received identical questionnaires.

Participating nurses received instructions stating that the patient in each clinical vignette was critically ill and was likely to experience a cardiopulmonary arrest. A DNR order was being considered for each patient. Based on the information contained in the vignettes, the participants were to rate the appropriateness of the DNR order on a Likert scale ranging from 1 to 5 points, indicating strong disagreement, or strong agreement, respectively. The DNR questionnaire appears in Appendix B.

Demographic Survey

A demographic questionnaire was developed by the researcher to obtain information about age, marital status, religious affiliation, highest nursing degree obtained, years of clinical experience and specialty area of the nurse. Additional data concerning the work situation were collected. A sample of the Demographic questionnaire appears in Appendix C.

Data Collection Procedures

The Committee on Research Participation, which is the Institutional Review Board for the University of Tennessee, approved this study under Form A (research exempt from review).

The investigator also received permission to collect data from the Vice Presidents of Nursing at Fort Sanders

Regional Medical Center and St. Mary's Medical Center, Knoxville, Tennessee. The purpose and need for the study were described to the directors of nursing of each institution. This was followed by an introductory conference with the head nurses of each unit that participated in the study. A sample questionnaire was provided for each head nurse's perusal during the conference, and it was collected at the end of the meeting. The head nurses and coordinators were provided with written instructions which requested them to distribute the questionnaires to the registered nurses on their respective units.

Collection of data began in January, 1987 and continued for a period of 4 weeks. Participation of the staff nurses consisted of completing and returning the job involvement scale, the DNR questionnaire, and the demographic questionnaire. Most respondents completed the questionnaire during working hours. Since 20 to 25 minutes were required to complete the forms, nurses were permitted to take the questionnaire packet home and return it on the next working day.

The staff nurses returned the questionnaires to the head nurse's office, where a manila envelope had been provided by the researcher. The head nurses and coordinators returned the forms to a designated office at

each institution, where a collection box was provided for the questionnaires. The researcher collected the completed forms two to three times each week.

A cover letter (see Appendix D) accompanied each questionnaire and stated that a participant could withdraw from the study, without fear of penalty, at any time prior to the completion of the data analysis. The participants were instructed to give written notice to the investigator if they wished to withdraw from the study. All data were kept confidential, and questionnaires were coded so that only the researcher was able to identify the respondent.

As an incentive for participation, the researcher offered feedback regarding the results of the study. The investigator arranged to share the results with the directors of nursing from each medical center. The directors and investigator decided to disseminate the information as a seminar for any staff nurses who might be interested in the results of the study.

One week after the questionnaires had been distributed, the investigator telephoned the head nurses to offer them the opportunity to ask questions about the project. The investigator repeated the calls after the third week to offer assistance and to thank the head nurses and coordinators for their participation in the study.

Analysis of Data

Comparison of Patient Factors

A unique patient factor was represented in each of the 26 vignettes. Means and standard deviations were calculated for each patient factor, and the results were tabulated.

Although the questionnaire was designed to test for 13 patient variables, only 5 were chosen for analysis in this study. The investigator, after consultation with the thesis committee, concluded that confounding variables were present in most of the vignettes. A careful review of the literature disclosed that certain patient factors were likely to influence nurses' attitudes concerning DNR appropriateness. The following variables were chosen for analysis based on empirical data obtained in similar studies: (a) patient age, (b) living situation, (c) diagnosis of terminal cancer, (d) drug dependence, and (e) a history of dementia secondary to Alzheimer's disease. Means and standard deviations were calculated for the responses to each vignette. The difference between the mean responses for paired vignettes was determined by the paired t -test.

Nurse Characteristics

Frequency distributions were determined for the demographic and psychosocial characteristics of nurses participating in the study. Demographic variables included: (a) age, (b) gender, (c) race, (d) marital status, (e) religion, (f) nursing degree, (g) clinical experience, and (h) specialty area. Psychosocial characteristics included: (a) influence of religious beliefs, (b) prior experience with death, (c) exposure to DNR orders, and (d) job involvement. Means and standard deviations were calculated for age, years of clinical experience, months in specialty area, and job involvement score.

Interactions

Responses to the 26 vignettes were summed for each participant, and the composite score was utilized as the dependent variable for analysis. The following demographic and psychosocial characteristics of nurses comprised the independent variables: (a) age, (b) years of clinical experience, (c) specialty area, (d) experience with death, (e) frequency of exposure to DNR orders, (f) degree of religious influence, and (g) highest nursing degree obtained. Mean scores for the dependent variables were compared by a Repeated Measures Analysis of Variance; the

General Linear Model (GLM) was used when an unbalanced design did not permit ANOVA.

The Statistical Analysis System (SAS) Tukey's Studentized Range Test was used as the multiple comparison procedure.

Computerized Analysis

Statistical analysis of the data was performed using a version of the SAS computer program. An alpha level of .05 was selected as the criterion of statistical significance for the study.

CHAPTER IV

RESULTS

Chapter IV presents the findings of the study, including descriptive data of the sample, and analyses of the patient and nurse characteristics. A summary is provided to integrate the findings.

Descriptive Statistics for Total Sample

Three-hundred-fifty questionnaires were distributed to the nursing staffs of two medical centers. A total of 153 questionnaires (43.7%) were completed and returned to the researcher. The medical centers were equally represented, with 76 respondents (49.7%) from St. Mary's Medical Center, and 77 (50.3%) from Fort Sanders Regional Medical Center.

The typical staff nurse was female, married, Caucasian, Protestant and a diploma graduate. The subjects' ages ranged from 22 to 62 years, with a mean of 34 years. The majority (95.3%) of subjects were female, and 7 respondents (4.7%) were male. Sixty-five percent of the subjects were married. The subjects were fairly homogeneous in race (97% Caucasian) and religious affiliation (71% Protestant). Fifty-eight percent of subjects were diploma graduates. Length of clinical nursing experience ranged from less than 1 year to 37

years, with a mean of 9 years. Nurses had worked in their specialty areas 2 to 384 months. Frequency distributions of the demographic characteristics of the subjects are summarized in Table 1. Table 2 presents means, standard deviations, and ranges for age, length of clinical experience and tenure in a specialty area.

Data on the psychosocial characteristics of the nurse sample appear in Table 3. The majority of the subjects (87%) had experienced the death of family members as well as patients, while 11.6% had experienced only the death of patients under their care. The frequency of nurses' exposure to DNR orders ranged from frequent to rare encounters. Fifty-five nurses (37.7%) indicated exposure to one or more DNR orders per week. Twenty-nine nurses (19.9%) had contact with DNR orders every two weeks, and 28 nurses (19.2%) had contact with a DNR order once per month. Several nurses (14.4%) indicated that they rarely had contact with DNR orders in their specialty area. Seventy-three respondents (49%) indicated that their religious beliefs had a major influence in their daily lives, while 35.6% indicated a moderate influence. Scores on the job involvement scale ranged from 15 to 44. One hundred-twenty-one subjects (81.2%) had scores of 34 or less on the job involvement score, indicating a minimal to moderate degree of job involvement at the time of testing.

Table 1. Frequency Distribution of Selected Demographic Variables for Total Nurse Sample.

<u>Variable</u>	<u>Number</u>	<u>Percent</u>
Age		
20-35	100	67.0
36-50	38	26.0
>50	11	7.0
Gender		
Female	142	95.3
Male	7	4.7
Race		
Caucasian	143	96.0
Other	6	4.0
Marital Status		
Single	37	24.8
Married	97	65.1
Divorced/Separated	15	10.1
Religion		
Protestant	106	71.6
Catholic	15	10.1
Other	28	18.3
Nursing Degree		
Associate Degree	35	23.5
Diploma	87	58.4
Baccalaureate	27	18.1
Clinical Experience		
0-5 years	61	41.0
>6 years	88	59.0

Table 1 (Continued)

<u>Variable</u>	<u>Number</u>	<u>Percent</u>

Specialty Area		
Critical Care	60	40.3
Non-critical	53	35.6
Other	36	24.1

Table 2. N, Means, Standard Deviations, and Minimum and Maximum Scores for Total Sample.

<u>Variable</u>	<u>N</u>	<u>Mean</u>	<u>S.D.</u>	<u>Minimum</u>	<u>Maximum</u>
Age of Nurse	149	34.2	9.4	22	62
Years of Clinical Experience	149	9.2	8.0	1	37
Months in Specialty Area	148	76.5	78.5	2	384
Job Involvement	149	30.1	4.5	15	44

Table 3. Frequency Distribution of Psychosocial Variables for the Total Nurse Sample.

<u>Variable</u>	<u>Number</u>	<u>Percent</u>
Experience with Death		
Patient only	17	11.6
Family only	1	0.7
Patients and Family	127	87.0
No experience	1	0.7
Exposure to DNR Orders		
One or more/week	55	37.6
One every 2 weeks	29	19.9
One per month	28	19.2
One per 6 months	13	8.9
Other	21	14.4
Influence of Religious Beliefs		
Major	73	49.0
Moderate	53	35.6
Minimal	23	15.4
Job Involvement		
11-34	121	81.2
>35	28	18.8

Note: Due to missing data, the total number of subjects does not always equal 149.

A plausible explanation for the moderate to low degree of job involvement indicated by the scores is that the scale may not have tapped the underlying attributes of nursing. It is conceivable that the instrument was not sensitive to the construct of job involvement as related to the central-life interest and importance of job performance to the self-esteem of nurses. Another explanation, as indicated by Lounsbury and Hoopes (1986), is that a vacation from work frequently lowers the degree of job involvement for many employees. The present study was conducted in January following the holiday season, when many nurses take a few days off to be with their families.

The raw scores for the responses to each clinical vignette ranged from 1 to 5 points. Mean scores ranged from a high of 4.2 for the patient variable of terminal cancer to a low of 1.2 for the age factor of 32 years. Table 4 presents the remaining patient factors and their corresponding mean scores and standard deviations.

Comparison of Patient Factors

The primary question of this study was, "What patient factors influence nurses' attitudes concerning the appropriateness of a DNR order?" The relationship of nurses' attitudes and particular patient factors was examined through clinical vignettes. Comparisons were made

Table 4. N, Means, and Standard Deviations for Responses to Clinical Vignettes.

Patient Factor	N	Mean	S.D.
Terminal Carcinoma	149	4.22	0.90
Terminal Heart Disease	149	3.59	1.0
Drug Abuse	149	1.79	0.72
Non-drug Abuse	149	1.71	0.68
Alcoholism	149	2.55	1.0
Non-alcoholism	149	3.04	0.90
Mental Retardation	149	2.30	1.0
Non-mental Retardation	149	1.39	0.71
Dementia	149	3.69	1.0
Dementia and Paraplegia	149	3.85	0.94
Multiple Suicide Attempts	149	2.10	0.82
Acute Suicide Attempt	149	1.69	0.80
Age			
32 years	149	1.27	0.70
64 years	149	1.81	0.80
98 years	149	3.53	1.1
Institutionalization	149	4.14	0.92
Non-Institutionalization	149	3.53	1.1
Nonadherence	149	2.34	0.93
Adherence	149	2.17	0.90

Table 4 (Continued)

<u>Patient Factor</u>	<u>N</u>	<u>Mean</u>	<u>S. D.</u>
Violent Crime	149	1.86	0.90
Non-violent Crime	149	1.65	0.72
Street Person	149	2.18	0.92
Non-street Person	149	1.48	0.72
Related to Staff	149	4.02	0.90
Not Related to Staff	149	4.12	0.94
Alzheimer's Disease	149	2.88	1.0
Non-Alzheimer's Disease	149	1.51	0.72

on the basis of the presence or absence of the patient factor in a paired vignette, as described in the previous chapter. Five patient factors were chosen for analysis based on literature which supported their likelihood to influence the decision to withhold CPR.

Living Situation

The first subsidiary question asked if living situation of the patient influenced nurses' attitudes concerning the appropriateness of a DNR order. Patients with comparable diagnoses resided either at a nursing home or with their wife and daughter to compare the influence of living situation. The mean for institutionalization was 4.14 while that for non-institutionalization was 3.53. These means were significantly different ($t = 7.47$; $P \leq 0.0001$).

Age

The second factor of interest was the age of the patient and its potential influence on nurses' attitudes toward DNR orders. Three clinical vignettes were utilized to test for the factor of age. The vignettes presented the diagnosis of pulmonary embolism for female patients who were 32, 64 or 98 years old. The means for each age variable were 1.27, 1.81, and 3.53, respectively. Means were significantly different ($F = 254.76$; $P \leq 0.0001$). A

DNR order for the 98 year old patient elicited responses that affirmed the appropriateness of the order. The ages of 64 and 32 elicited responses that disagreed with the appropriateness of a DNR order. The younger age evoked significantly stronger disagreement ($P \leq 0.05$) than the age of 64.

Terminal_Cancer

The second subsidiary question asked whether the diagnosis of terminal cancer would influence nurses' attitudes concerning a DNR order. Patients of the same gender and of similar age were paired in case vignettes which contrasted the diagnosis of metastatic breast carcinoma with end-stage cardiomyopathy. The mean for the diagnosis of breast cancer was 4.22 and the mean for end-stage cardiomyopathy was 3.59. Means were significantly different ($t = 8.19$; $P \leq 0.0001$), affirming that the diagnosis of terminal cancer positively influenced nurses' attitudes toward a DNR order.

Drug_Dependence

The diagnosis of drug dependence was tested for its influence on the decision to withhold CPR. Patients of the same gender and similar age had identical diagnoses, but one was drug-dependent and the other was not. The means for drug dependence and non-drug dependence were 1.79 and

1.71, respectively, and were not significantly different ($t = 1.61$; $P \leq 0.108$). The patient factor of drug dependence did not influence the nurses in this sample to accept a DNR order.

Dementia

The fifth patient factor tested was a history of dementia secondary to Alzheimer's disease. Male patients of similar age and diagnosis differed only in that one had severe dementia due to Alzheimer's disease. The mean for the patient factor of dementia was 2.88, while the mean for the vignette without the factor was 1.51. Means were significantly different ($t = 15.54$; $P \leq 0.0001$), indicating that the presence of dementia secondary to Alzheimer's disease influenced the nurses' attitudes.

Tables 5 and 6 summarize the findings for the patient factors that were analyzed.

Comparison of Nurse Characteristics

Two subsidiary questions addressed the potential influence of nurses' demographic and psychosocial characteristics on attitudes concerning the appropriateness of DNR orders. The influences of the age of the nurse and the number of years of clinical experience were examined by comparing subgroup responses to the patient age factor. Differences were determined by separate Repeated Measures

Table 5. Degrees of Freedom, Sums of Squares, Mean Squares, F-Value and Probability of Patient Age Factor.

Source	DF	Sum of Squares	Mean Square	F-Value	PR>F
Patient Age	2	351.33	175.66	254.76	0.000
(Error)	147	202.72	0.689		

Table 6. Means, Standard Deviations, t-Statistics, Degrees of Freedom and Probabilities of Various Patient Factors.

Variable	Means	SD	t	df	PR> t
Institution- alization	4.14	0.915	7.47	148	0.0001
Non-institu- tionalization	3.53	1.068			
Terminal	4.22	0.901	8.19	148	0.0001
Cancer					
Cardiomyopathy	3.59	0.965			
Drug	1.79	0.728	1.61	148	0.108
Dependence					
Non-drug	1.71	0.688			
dependence					
Dementia	2.88	0.1003	15.54	148	0.0001
secondary to					
Alzheimer's					
Non-dementia	1.51	0.722			

Analyses of Variance. Comparisons also were made between five additional characteristics of the nurse and the respective composite scores for the clinical vignettes.

Age of the Nurse

Nurses were divided into two groups by age: ≤ 35 years of age, or >35 years of age. The mean scores for responses to patients of varying ages were compared between the two age groups of nurses, and are presented in Table 7. No association was found between the age of the nurse and responses to the patient age factor.

Table 7. Mean Responses of Two Age Groups of Nurses to Patient Age Factor

		<u>Means for Patient Age Factor</u>		
<u>Variable</u>	<u>N</u>	<u>32</u>	<u>64</u>	<u>98</u>
Nurse Age				
≤ 35 years	100	1.25	1.85	3.62
>35 years	49	1.33	1.73	3.40

Years of Clinical Experience

Nurses were divided into two groups based on the length of their clinical experience: ≤ 5 years, or >5 years. The mean scores for responses to patients of varying ages were compared between the two groups of nurses

with differing lengths of tenure, and are presented in Table 8. No significant difference was found between the mean responses to patient age and the length of clinical experience.

Table 8. Mean Responses to Patient Age Factor According to Years of Clinical Nursing Experience.

		<u>Means for Patient Age Factor</u>		
<u>Variable</u>	<u>N</u>	<u>32</u>	<u>64</u>	<u>98</u>
Clinical Experience of Nurse				
≤5 years	62	1.22	1.83	3.61
>5 years	87	1.31	1.79	3.48

Clinical Specialty, Experience with Death, and Frequency of Exposure to DNR Orders

The influence of clinical specialty area, experience with death, and frequency of exposure to DNR orders were determined by comparing composite scores for the 26 clinical vignettes as a dependent variable. The composite means for the nurse characteristics were as follows: (a) critical care area, 71.8; non-critical care area, 71.2, (b) experience with family and patient deaths, 71.2; experience with patient death only or no experience with death, 70.8;

exposure to one or more DNR orders per week, 70.8; DNR exposure of one every week to once every 6 months, 71.9 ($F = 0.46$; $P \leq 0.76$). None of the means were significantly different. The previously mentioned nurse characteristics did not influence nurses' attitudes concerning the appropriateness of DNR orders.

Highest_Nursing_Degree_Obtained

The influence of the highest nursing degree obtained by the subject was evaluated by comparing the composite scores for the clinical vignettes. The mean composite scores were: (a) associate degree, 71.7, (b) baccalaureate degree, 73.0, and (c) diploma, 69.2 ($F = 1.51$; $P \leq 0.22$).

Nursing degree did not influence responses to the clinical vignettes.

Degree_of_Religious_Influence

The impact of the degree of religious influence in daily life was evaluated by comparing the composite scores for the vignettes. The mean composite scores were as follows: (a) major influence, 69.0, (b) moderate influence, 71.5, and (c) minimal influence, 74.0 ($F = 2.21$; $P \leq 0.11$).

The degree of religious influence did not significantly affect responses to the clinical vignettes.

Summary_of_Findings

The results of this study indicated that the age of the patient had a significant influence on nurses' attitudes toward a DNR order. The respondent was more likely to agree with a DNR order as patient age increased, with strong agreement for a 98 year old patient. The study also found that DNR orders were considered appropriate for patients with terminal cancer or dementia secondary to Alzheimer's disease, and for those residing in a nursing home.

The patient factor of drug dependence did not increase the likelihood of acceptance of a DNR order. Demographic and psychosocial characteristics of the nurse did not exert influences on DNR acceptance.

CHAPTER V

DISCUSSION

This study provides new information on the resuscitative issue. A number of research studies have been conducted to ascertain the effect of non-medical factors on physicians' decisions to withhold CPR. Similar studies have not been done with nurses, presumably because the physician has held the primary responsibility for the DNR decision (Farber et al., 1984). Arguments against this unilateral decision-making were found in medical and nursing literature and were presented in Chapter Two.

The traditional norms that guided the decisions of health care professionals in the past are difficult to apply in the era of technology. Care givers are challenged to reach a social definition of life, a definition based on perceived worth and interpersonal capacity (Lippincott, 1979). The allocation of limited medical resources and the care of the terminally ill patient are vitally linked issues as health care professionals question the feasibility of expending scarce resources on those who will not benefit. Siegler (1984) warned that individual rights such as liberty and freedom may be sacrificed in the interest of societal efficiency and cost concerns. A dilemma arises concerning which criteria should be used to

make judgments regarding the extent of care for the terminally ill patient.

Comparisons to Previous Investigations

Patient Factors

The medical diagnosis of terminal or end-stage disease was cited by Youngner et al. (1985) and Lewandowski et al. (1985) as the most prevalent criterion utilized for designation of a DNR order. More specifically, Farber et al. (1985) found that a diagnosis of terminal cancer influenced physician and nurse decisions to withhold CPR. In the present study, a comparison was made between terminal breast cancer and the diagnosis of end-stage cardiomyopathy. As in Farber's study, the diagnosis of terminal cancer significantly influenced nurses to affirm a DNR order. The current findings lend support to the conclusion that an expectation of death is an acceptable criterion for the designation of a DNR order.

The non-medical factor of patient age remains a controversial criterion for the designation of a DNR order. A study by Bedell et al. (1983) indicated that the age of the patient had no correlation with the survival of cardiopulmonary resuscitation. In accordance, Witte (1984) found that patient age and DNR status were not correlated in a retrospective study of 100 charts. Siegler (1984)

strongly recommended that age not be used as a criterion for a DNR decision. Age, however, remains an influential factor in deciding the resuscitative issue. In a prospective study, Lewandowski et al. (1985) found that DNR patients were older than non-DNR patients. Farber et al. (1984; 1985) correlated patient age with decisions to withhold CPR. The present study supported the finding that age influences the resuscitative decision. An association was found between the age of the patient and agreement with a DNR order; nurses were more likely to agree to withhold CPR as patient age increased.

Witte (1984) found a correlation between decreased mental status and the designation of a DNR order. Chipman et al. (1981) reported that 54% of emergency room physicians would cease CPR on a patient who had a known mental impairment such as mental retardation or senile dementia. Additional data were presented by Farber et al. (1985) to indicate that prior knowledge of the patient's dementia decreased the likelihood that physicians and nurses would initiate CPR. The current study supported these findings. An association was found between a patient history of dementia secondary to Alzheimer's disease and a favorable attitude by staff nurses toward a DNR order.

In the current study, the place of residence was found to influence nurses' attitudes concerning the

appropriateness of a DNR order. The patient who resided at a nursing home was less likely to be resuscitated than a patient living with family. These results support findings of Chipman et al. (1981) that 18% of emergency room physicians would cease CPR on a patient admitted from a nursing home. Results of the present study conflicted with those of Farber et al. (1985), who found that nurses were likely to initiate CPR on patients admitted from a nursing home. Nurses in the current study may have been influenced equally by the advanced age of the patient, however, and thus were inclined to agree with a DNR order.

The studies conducted by Farber et al. (1984; 1985) found that physicians and nurses were likely to withhold CPR on a patient who had a history of drug dependence. Nurses in the present study, however, strongly disagreed with a DNR order for a patient who was a drug abuser.

Nurse_Characteristics

Several studies have found correlations between characteristics of nurses and ethical decision-making. Crisham (1980) and Mayberry (1986) found that nurses with baccalaureate or master's educations had more advanced levels of critical thinking and moral reasoning than nurses with technical nursing preparation. The current study, however, found no differences in responses to the clinical vignettes according to nursing degree.

The age of the nurse or years of clinical experience had no significant influence on responses in this study. Mayberry (1980) found that nurses with fewer years in practice immediately following formal education had greater principled reasoning ability. Crisham (1980) felt that more experienced nurses were subject to the "milieu effect", in which the moral judgments of others in the environment are imitated, or personnel become imbued with the goals of the institution for which they work.

The spiritual beliefs of the nurse are thought to influence attitudes toward death and dying. Hopping (1979) found that nurses responded more positively toward death when they believed in a spiritual being. Popoff (1975) found that nurses with strong religious beliefs were less likely to support a DNR order. The data obtained in this study did not support the previous findings. No differences in composite scores for the clinical vignettes were found between groups varying in the degree of religious influence in daily life.

This study found no significant association between frequency of exposure to DNR orders or experience with death and responses to clinical vignettes. Clinical specialty area also had no significant influence on the attitudes of the nurses. Research in these areas has been

very limited, so it would be difficult to draw any conclusions at this time.

The small sample size and homogeneity in nursing degree and religious beliefs may explain the lack of significant findings in regard to nurse characteristics. A larger sample size with nurses equally distributed among the clinical specialty areas may provide a more accurate representation of nurses working in critical versus non-critical units.

Limitations of the Study

A major limitation of this study was the small sample size. Despite four weeks of data collection, the response rate remained low. Results are representative of the participating nurses, but may not reflect the attitudes of nurses in the community.

An extraneous variable unexpected by the researcher was the adoption of new DNR policies in both medical centers 3 to 6 months prior to this study. Staff nurses might have been sensitized to the DNR issue, and their responses to the clinical vignettes could have been influenced accordingly.

The DNR questionnaire was another potential source of variability. This project was a replication of a study by Farber et al. (1984), but nurses rather than physicians were used as subjects. Although the questionnaire had been

reviewed and pilot-tested, the validity and reliability remained uncertain. Many of the paired vignettes contained confounding variables that potentially could influence responses. Analysis of responses therefore was limited to the five paired vignettes for which extraneous variables were controlled.

Multiple interpretations of the term 'DNR order' may have influenced test responses. Lewandowski et al. (1985) indicated that connotations for a DNR order may vary from withholding CPR to cessation of all medical interventions. The inclusion of a brief definition of a DNR order in the questionnaire would have clarified the meaning in the present study.

The use of clinical vignettes to measure attitudes may be another point for criticism. The disadvantages of using vignettes are the artificiality of the situation and the lack of a clear correlation between test performance and actual clinical behavior. Flaskerud (1979) stated, however, that vignettes are a valid and desirable method of eliciting responses toward broad concepts. Shelley et al. (1987) found that simulation measurement is a useful technique for controlling otherwise nonrandomized variables toward which simulated behaviors or attitudes are addressed. Further, the survey results correspond with actual clinical data supplied by Lewandowski et al. (1985)

and Witte (1984) concerning the criteria used to designate DNR status.

Ajzen and Fishbein (1977) have shown that clinical vignettes are correlated to actual behavior when the instrument accurately depicts a clinical situation. Although the vignettes may be criticized for the brevity of available information, decisions in the clinical situation often are made on similarly limited data (Farber et al., 1984). Therefore, the responses in the present study are thought to reflect the nurses' attitudes regarding a DNR order for a particular patient situation.

Another factor that may have influenced the staff nurses' responses is the quality-of-life principle. Nurses may have judged the lives of the terminally ill patient, the Alzheimer's patient and the patient from the nursing home to be of poor quality. The investigator can only speculate on the possible influence of the quality-of-life principle since the study was not designed to discriminate this variable.

The investigator advises caution in the generalization of these findings to other groups of nurses, primarily due to the relatively small sample size.

Implications for Nursing Actions

It is crucial that nurses begin to identify the criteria used to support their decisions regarding the appropriateness of a DNR order. Empirical data indicate that non-medical patient factors influence the resuscitative decision (Farber et al., 1984; Pearlman et al., 1982). Clearly, it is necessary for nurses to recognize that personal values often form the bases for their decisions. These values and beliefs define the worth of individuals as well as their quality of life. Clarification of values increases the effectiveness of care givers and heightens sensitivity to the value systems operative in patients, families and other professionals (Davis et al., 1983).

Ketefian (1981) stated that ethical practice and ethical decision-making remain highly individualistic and intuitive rather than a well-reasoned and well-informed process. The intellectual and ethical reasoning of nurses must be as developed and as sophisticated as the technology which they practice. Principled reasoning can be developed by: (a) engaging in ethical discussions with colleagues to broaden one's perspective, (b) serving on an ethics committee to gain appreciation for the complexity of the resuscitative decision, and (c) questioning personal motivation for supporting or opposing a DNR decision for a

particular patient. The study of ethics assists nurses to identify their moral positions and prejudices to prevent biases from unconsciously interfering with the ability to provide care (Thompson & Thompson, 1981).

Ethics are an integral part of each nurse's professional and therapeutic interaction with patients. Nurses assist patients to solve problems by guiding them through the decision-making process. Compassionate, sensitive, and candid discussion with the patient and family is an essential component of the DNR decision. Consultation with the patient recognizes and respects individual rights and personal dignity.

As members of the health team, nurses participate in crucial decisions that should reflect the patient's best interests. An ethical view of a DNR order maintains a rational approach to an emotional issue. Nurses must participate actively in ethical decisions since cognition and accountability are characteristics of a professional performance (Schrock, 1980). The ability to articulate an ethical position is a responsibility of the professional nurse.

Implications for Nursing Research

The sample in this study was small, rather homogeneous, and not randomized. Replication of the study

with a larger sample representing a more equal distribution of the different nursing degrees and clinical specialty areas is recommended. Continued work on the development of a reliable and valid instrument to test the influence of patient factors on attitudes toward DNR orders is advisable. A well designed instrument could help to establish the degree to which certain patient variables interact to influence nurses' attitudes, since multiple patient factors are usually present for consideration in the resuscitative decision.

A descriptive study to elicit nurses' responses regarding their perceived role in the DNR decision-making process would explore an area which has not been researched previously. The study could ascertain perceived responsibilities to the patient and society as well as legal concerns in the DNR decision.

Conflict, both personal and professional, often surrounds the resuscitative decision. An investigation designed to study the strategies employed by nurses to resolve an ethical dilemma would yield new information. The study would help to identify the methods used most frequently, as well as the perceived effectiveness of each strategy.

Another pertinent area for study is the patient classification system adopted by many hospitals. Patient

classification systems delineate the extent of therapeutic effort to be used with a patient in each classification. Categories range from maximal therapeutic effort without reservation (Class A) to therapeutic measures which increase comfort (Class D) (Shelley et al., 1987). The effect of the classification system on the DNR decision is unexplored.

Nursing research regarding the resuscitative issue is in the preliminary stages. This study explored new aspects of the resuscitative issue and served to generate theory rather than to validate it. Davis and Aroskar (1983) indicate that the fundamental task of health care ethics is to prepare the ground for the application of general moral principles. Selective resuscitation and the influence on the ethical decision-making process of nurses remain largely unexplored in nursing research. The resuscitative issue will continue to provide fruitful topics for research as nurses seek to reduce the conflict between scientific advances in technology and the art of caring for the human spirit.

LIST OF REFERENCES

REFERENCES

- Ajzen, I., & Fishbein, M. (1977). Attitude-Behavior relations: A theoretical analysis and review of empirical research. Psychological Bulletin, 84, 888-918.
- Andrews, S., & Hutchinson, R. (1981). Teaching nursing ethics: A practical approach. Journal of Nursing Education, 20, 6-11.
- Bandman, E. (1978). The dilemma of life and death: Should we let them die? Nursing Forum, 17, 118-132.
- Bandman, B., & Bandman, E. (1985). Nursing ethics in the life span. Connecticut: Appleton-Century-Crofts.
- Bedell, S., & Delbanco, T. (1984). Choices about cardiopulmonary resuscitation in the hospital: When do physicians talk with patients? New England Journal of Medicine, 309, 1089-1093.
- Bedell, S., Delbanco, T., Cook, E., & Epstein, F. (1983). Survival after cardiopulmonary resuscitation in the hospital. New England Journal of Medicine, 309, 569-572.
- Calman, K. (1984). Quality of life in cancer patients -- an hypothesis. Journal of Medical Ethics, 10, 124-127.
- Chipman, C., Adelman, R., & Sexton, G. (1981). Criteria for cessation of CPR in the emergency department. Annals of Emergency Medicine, 10, 19-25.
- Crisham, P. (1981). Measuring moral judgment in nursing dilemmas. Nursing Research, 30, 104-110.
- Curran, W. (1978). The Saikewicz decision. New England Journal of Medicine, 298, 499-500.
- Curtin, L. (1979). CPR: Optimal care vs. maximal treatment. Supervisor Nurse, 10, 16-18.
- Curtin, L., & Flaherty, M. (1982). Nursing Ethics: Theories and Pragmatics. Maryland: Prentice-Hall.
- Davis, A. (1979). Ethics rounds with intensive care nurses. Nursing Clinics of North America, 14, 45-55.

- Davis, A. (1981). To make live or let die. American Journal of Nursing, 81, 582.
- Davis, A., & Aroskar, M. (1983). Ethical Dilemmas and Nursing Practice (2nd ed.). Connecticut: Appleton-Century-Crofts.
- Dolan, M. (1984). Where do you stand on...the coding question? Nursing, 14(3), 42-48.
- Evans, K. (1981). No resuscitation orders - an emerging consensus. Canadian Medical Association Journal, 125, 892-896.
- Farber, N., Bowman, S., Major, D., & Green, W. (1984). Cardiopulmonary resuscitation (CPR): Patient factors and decision making. Archives of Internal Medicine, 144, 2229-2232.
- Farber, N., Weiner, J., Boyer, G., Green, W., Diamond, M., & Copare, I. (1985). Cardiopulmonary resuscitation: Values and decisions - a comparison of health care professionals. Medical Care, 23, 1391-1398.
- Flaskerud, J. (1979). Use of vignettes to elicit responses toward broad concepts. Nursing Research, 28, 210-212.
- Fox, M., & Hipton, H. (1983). The decision to perform CPR. New England Journal of Medicine, 309, 607-608.
- Gillick, M. (1980). The ethics of cardiopulmonary resuscitation: Another look. Ethics in Science and Medicine, 7, 161-169.
- Halloran, J. (1967). Attitudes Formation and Change. Great Britain: Leicester University Press.
- Halloran, M. (1982). Rational ethical judgments utilizing a decision-making tool. Heart and Lung, 11, 566-570.
- Hopping, B. (1977). Nursing students' attitudes toward death. Nursing Research, 26, 443-447.
- Ketefian, S. (1981). Critical thinking, educational preparation, and development of moral judgment among selected groups of practicing nurses. Nursing Research, 30, 98-103.

- Ketefian, S. (1987). A case study of theory development: Moral behavior in nursing. Advances in Nursing Science, 9, 10-19.
- Langham, P. (1977). Open forum: On teaching ethics to nurses. Nursing Forum, 16, 220-227.
- Lawrence, J., & Farr, E. (1982). The nurse should consider. Critical care ethical issues. Journal of Advanced Nursing, 7, 223-229.
- Lewandowski, W., Daly, B., McClish, D., Juknialis, B., & Youngner, S. (1985). Treatment and care of 'do not resuscitate' patients in a medical intensive care unit. Heart and Lung, 14, 175-181.
- Lippincott, R. (1979). Psychological stress factors in decision making. Heart and Lung, 8, 1093-1097.
- Lo, B., & Jonsen, A. (1980). Clinical decisions to limit treatment. Annals of Internal Medicine, 93, 764-768.
- Lodahl, T., & Kejner, M. (1965). The definition and measurement of job involvement. Journal of Applied Psychology, 49, 24-33.
- Lounsberry, J., & Hoopes, L. (1986). A vacation from work: changes in work and nonwork outcomes. Journal of Applied Psychology, 71, 392-401.
- Lumpp, F. (1979). The role of the nurse in the bioethical decision-making process. Nursing Clinics of North America, 14, 13-21.
- MacDonell, J. (1981). 'No resuscitation' orders. Canadian Medical Association Journal, 125, 809.
- Mahon, K., & Fowler, M. (1979). Moral development and clinical decision-making. Nursing Clinics of North America, 14(1), 3-12.
- McCormick, R. (1974). To save or let die: The dilemma of modern medicine. Journal of the American Medical Association, 229, 172-176.
- Mayberry, M. (1986). Ethical decision making: A response of hospital nurses. Nursing Administration Quarterly, 10, 75-81.

- Mappes, T., & Zembaty, J. (1986). Biomedical Ethics (2nd ed.). New York: McGraw-Hill Book Co.
- Miles, S., Cranford, R., & Schultz, A. (1982). The do-not-resuscitate order in a teaching hospital. Annals of Internal Medicine, 96, 660-664.
- Papalia, D., & Olds, S. (1978). Human Development (pp. 202-205). New York: McGraw-Hill Book Company.
- Pearlman, R., Inui, T., & Carter, W. (1982). Variability in physician bioethical decision-making. Annals of Internal Medicine, 97, 420-425.
- Popoff, D. (1975). What are your feelings about death and dying, part 3. Nursing, 5(10), 39-50.
- President's Commission for study of ethical problems in medicine and biomedical and behavioral research. (1983). Deciding to forego life-sustaining treatment. Washington, D.C.: Government Printing Office.
- Rabkin, M., Gillerman, G., & Rice, N. (1976). Orders not to resuscitate. New England Journal of Medicine, 295, 364-366.
- Saleh, S., & Hosek, J. (1976). Job involvement: Concepts and measurements. Academy of Management Journal, 19, 213-224.
- Schram, R., Kane, J., & Roble, D. (1978). 'No code' orders: Clarification in the aftermath of Saikewicz. New England Journal of Medicine, 299, 875-878.
- Schrock, R. (1980). A question of honesty in nursing practice. Journal of Advanced Nursing, 5, 135-148.
- Shelley, S., Zahorchak, R., & Gambrill, C. (1987). Aggressiveness of nursing care for older patients and those with do-not-resuscitate orders. Nursing Research, 36, 157-162.
- Siegler, M. (1984). Should age be a criterion in health care? The Hastings Center Report, 14, 24-27.
- Superior Court of New Jersey. (1978). In the matter of Karen Quinlan, an alleged incompetent. In R.F. Weir (Ed.), Ethical Issues in Death and Dying (pp. 271-273). New York: Columbia University Press.

- Taylor, S. (1985). The effect of quality of life and sanctity of life on clinical decision making. AORN Journal, 41, 924-928.
- Thompson, J., & Thompson, H. (1981). Ethics in Nursing. New York: Macmillan Publishing Co., Inc.
- Weber, L. (1973). Ethics and euthanasia: Another view. American Journal of Nursing, 73, 1228-1230.
- Witte, K. (1984). Variables present in patients who are either resuscitated or not resuscitated in a medical intensive care unit. Heart and Lung, 13, 159-163.
- Yarling, R., & McElmurry, B. (1983). Rethinking the nurse's role in 'do not resuscitate' orders: a clinical policy proposal in nursing ethics. Advances in Nursing Science, July, 1-12.
- Youngner, S., Levandowski, W., McClish, D., Juknialis, B., Coulton, C., & Bartlett, E. (1985). 'Do not resuscitate orders'. Journal of the American Medical Association, 253, 54-57.

APPENDIXES

APPENDIX A

Job Involvement Scale

Instructions: Listed below are a series of statements that represent how people feel about their work. Use the following scales to express the way you feel about your present job. Check the space under the letter which best describes whether you agree with, disagree with, or can't decide about each statement.

SD -- means you strongly disagree with the statement
 D -- means you disagree with the statement
 ? -- means you can't decide or have mixed feelings about the statement
 A -- means you agree with the statement
 SA -- means you strongly agree with the statement.

	Responses				
	SA	A	?	D	SD
1. The most important things I do are involved with my job.	----	---	---	---	----
2. The major satisfaction in my life comes from my job.	----	---	---	---	----
3. The activities which give me the greatest pleasure and personal satisfaction involve my job.	----	---	---	---	----
4. I live, eat and breathe my job.	----	---	---	---	----
5. I have other activities more important than my work.	----	---	---	---	----
6. How well I perform on my job is extremely important to me.	----	---	---	---	----
7. I feel badly if I don't perform well on my job.	----	---	---	---	----
8. I am very much personally involved in my work.	----	---	---	---	----
9. I avoid taking on extra duties and responsibilities in my work.	----	---	---	---	----
10. Some nights I lie awake thinking about the next day's work.	----	---	---	---	----

APPENDIX B

Questionnaire

The patient in each clinical vignette is critically ill and is likely to suffer a cardiopulmonary arrest. A do not resuscitate (DNR) order is being considered for each patient. Based on the information presented in each case, mark the space that most accurately indicates your attitude concerning the appropriateness of a DNR order for each patient. SA - strongly agree; A - agree; ? - Undecided; D - disagree; SD - strongly disagree.

Description of a Clinical Case	Responses				
	SA	A	?	D	SD
1. A 32 year old female with a pulmonary embolism.	----	----	----	----	----
2. An 81 year old male with severe dementia due to cerebral anoxia; resides at nursing home; presents with acute myocardial infarction.	----	----	----	----	----
3. A 72 year old female with pneumonia and sepsis; has dementia due to near-drowning accident.	----	----	----	----	----
4. A 43 year old female with cellulitis and sepsis; patient has been diagnosed as chronic undifferentiated schizophrenia, with no known address.	----	----	----	----	----
5. A 48 year old female with end-stage metastatic breast carcinoma.	----	----	----	----	----
6. A 48 year old female patient whose husband has recently died; has attempted suicide by gas inhalation.	----	----	----	----	----
7. An 84 year old male with severe dementia after a cardiac arrest. Patient lives with wife and daughter and presents with chest pain.	----	----	----	----	----
8. A 64 year old female with a pulmonary embolism.	----	----	----	----	----
9. A 53 year old female with end-stage cardiomyopathy.	----	----	----	----	----

SA A ? D SD

10. A 76 year old female with urosepsis, has dementia and paraplegia from previous strokes.

11. A 52 year old male with hepatic encephalopathy due to chronic active hepatitis.

12. A 52 year old female with hypertension with accidental overdose of hypertensive medication.

13. A 59 year old female with chronic congestive cardiomyopathy; in acute pulmonary edema due to nonadherence to medication.

14. A 98 year old female with a pulmonary embolism.

15. A 50 year old male maintenance worker with a perforated ulcer.

16. A 56 year old female with ischemic cardiomyopathy; in acute pulmonary edema due to atrial fibrillation.

17. A 48 year old female with end-stage metastatic breast carcinoma.

18. A 53 year old male with a history of angina with acute chest pain.

19. A 38 year old male prisoner who has been convicted of murder and rape; has diabetic ketoacidosis.

20. A 45 year old septic male who is mentally retarded with an IQ of 40 and a mental age of 7 years.

21. A 23 year old male with prosthetic heart valve endocarditis as a result of intravenous drug abuse.

22. A 56 year old male with acute myocardial infarction; has been diagnosed as having Alzheimer's Disease and suffers from moderate to severe dementia.

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23. A 44 year old male with confusion and asterexis, and liver disease due to alcoholism.

24. A 45 year old male transportation worker with diabetes in a hyperosmolar state.

25. A 47 year old female with end-stage leukemia in blast crisis. She is a sister of the director of nursing.

26. A 24 year old male with prosthetic valve endocarditis due to rheumatic heart disease.

27. A 54 year old female with a history of depression and multiple suicide attempts has taken an overdose of amitriptyline hydrochloride.

APPENDIX C

Demographic Questionnaire

-
1. Year of birth 19____
 2. Sex: ____Female ____Male
 3. Race: ____Black ____Caucasian____Oriental
 ____Hispanic ____American Indian
 4. Marital Status ____Single ____Married
 ____Widowed ____Divorced or Separated
 5. Number of children: _____
 6. Religious Affiliation:
 ____Protestant ____Jewish
 ____Catholic ____Other
 7. Influence of religious beliefs in daily life:
 ____Major influence
 ____Moderate influence
 ____Minimal influence
 8. Nursing Degree Obtained:
 ____Associate Degree ____Baccalaureate
 ____Diploma ____Master's
 9. Years of Clinical Experience: _____
 10. ____Full-time (40 hrs./wk.) ____Part-time (<40 hrs./wk.)
 11. Clinical Specialty Area:
 ____Medical/Surgical ____Oncology
 ____Emergency Room ____Intensive Care
 ____Other (Specify)

12. Length of time in Clinical Specialty Area:

____Years and ____Months

13. Frequency of rotation to another clinical setting:

____More than once a month

____Every 2-3 months

____Every 4-6 months

____Once a year

____Rarely or never rotate to another clinical setting

14. Experience with Death:

____Patients with close interpersonal relationship only

____Patients with impersonal relationship only

____Close family member only

____Have had experiences with both family member and
patient deaths

____Have had no experience with death

15. Frequency of Exposure to Do Not Resuscitate (DNR)

Orders

____One or more per week

____One every 2 weeks

____One per month

____One per 6 months

____Other (specify) _____

APPENDIX D

Informed Consent Statement

Dear registered nurse:

You are invited to participate in a research study designed to develop a comprehensive description of nurses' attitudes concerning do not resuscitate (DNR) orders. Your participation will involve the completion of three questionnaires, and will require a total of approximately twenty-five minutes. Questionnaires will request information about job satisfaction, attitudes about the appropriateness of DNR orders, and demographic data about respondents.

No negative effects are expected to result from your participation in the project. Your participation may provide information that would be of benefit to registered nurses who care for patients designated as DNR status.

Each questionnaire will be coded with an identification number. Only the researcher will be able to identify individual respondents. All data will be kept confidential and stored in a locked filing cabinet in the researcher's home. All data will be summarized for any presentations or publications that arise from the research.

Participation in this project is voluntary and your consent for participation may be withdrawn at any time prior to completion of the data analysis by giving written notice to the researcher. If you do withdraw or choose not to participate, you will not incur any penalty.

If you have questions about your participation in the study, please feel free to contact the researcher listed below.

I have read and understand the above statements. I freely consent to participate in this project under the above conditions.

Signed_____

Date_____

Shirley A. Reinemeyer
5104 Skyline Drive
Knoxville, Tennessee 37914
(615) 522-7435

Thank you,



VITA

Shirley Ann Reinemeyer was born in Defiance, Ohio and received her primary and secondary education in parochial schools in Ohio. She is a graduate of the Lima School of Practical Nursing. She received the Bachelor of Science in Nursing degree from Kent State University in 1981. After graduation, she worked as a staff/charge nurse and assistant head nurse in the Medical Intensive Care Unit at The Ohio State University Hospital.

In January, 1986, she entered the College of Nursing at the University of Tennessee to pursue a Master of Science in Nursing degree, which was awarded in December, 1987.