

2

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

1a II 2a 2b	AD-A203 417	1b. RESTRICTIVE MARKINGS DTIC FILE COPY
3. DISTRIBUTION / AVAILABILITY OF REPORT Approved for public release; Distribution unlimited		

4. PERFORMING ORGANIZATION REPORT NUMBER(S) 101-88	5. MONITORING ORGANIZATION REPORT NUMBER(S)
---	---

6a. NAME OF PERFORMING ORGANIZATION US Army-Baylor University Graduate Program in Health Care	6b. OFFICE SYMBOL (If applicable) Admin/HSMA-IHC	7a. NAME OF MONITORING ORGANIZATION
---	--	-------------------------------------

6c. ADDRESS (City, State, and ZIP Code) Ft. Sam Houston, TX 78234-6100	7b. ADDRESS (City, State, and ZIP Code)
---	---

8a. NAME OF FUNDING / SPONSORING ORGANIZATION	8b. OFFICE SYMBOL (If applicable)	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER
---	-----------------------------------	---

8c. ADDRESS (City, State, and ZIP Code)	10. SOURCE OF FUNDING NUMBERS			
	PROGRAM ELEMENT NO.	PROJECT NO.	TASK NO.	WORK UNIT ACCESSION NO.

11. TITLE (Include Security Classification)
SURVEY OF UNITED STATES ARMY PHYSICIAN OPINION: THE ISSUE OF WRITTEN 'DO NOT RESUSCITATE' ORDERS

12. PERSONAL AUTHOR(S)
MAJ John N. McNair

13a. TYPE OF REPORT Study	13b. TIME COVERED FROM Jul 83 TO Jul 84	14. DATE OF REPORT (Year, Month, Day) Aug 84	15. PAGE COUNT 81
------------------------------	--	---	----------------------

16. SUPPLEMENTARY NOTATION

17. COSATI CODES			18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number) Health Care, Physician's Orders; Medical services; (17)
FIELD	GROUP	SUB-GROUP	

19. ABSTRACT (Continue on reverse if necessary and identify by block number)

As of mid-1983, the US Army medical community prohibited the use of written orders such as 'Do Not Resuscitate (DNR)' or 'No Code' in patient medical records. At the same time policy statements addressing DNR were in fairly widespread use in the civilian health care system. This study surveyed US Army physicians who have made or were likely to make DNR decisions in an attempt to determine whether or not they felt a written policy authorizing the charting of DNR orders was needed. Results indicated that more than 75% of all physicians surveyed believed that the Health Services Command should formulate a policy which allows DNR orders to be written in the charts of terminally ill patients. A suggested policy was presented.

20. DISTRIBUTION / AVAILABILITY OF ABSTRACT <input checked="" type="checkbox"/> UNCLASSIFIED/UNLIMITED <input type="checkbox"/> SAME AS RPT. <input type="checkbox"/> DTIC USERS	21. ABSTRACT SECURITY CLASSIFICATION
---	--------------------------------------

22a. NAME OF RESPONSIBLE INDIVIDUAL Lawrence M. Leahy, MAJ, MS	22b. TELEPHONE (Include Area Code) (512) 221-6345/2324	22c. OFFICE SYMBOL HSMA-IHC
---	---	--------------------------------

DTIC SELECTE
22 JAN 1989
S
E

**SURVEY OF UNITED STATES ARMY PHYSICIAN OPINION:
THE ISSUE OF WRITTEN "DO NOT RESUSCITATE"
ORDERS**

**A Graduate Research Project
Submitted to the Faculty of
Baylor University
in Partial Fulfillment of the
Requirements for the Degree
of
Master of Health Administration**

**By
John N. McNair
Major, MSC**

August 1983

89 1 18 035

TABLE OF CONTENTS

ACKNOWLEDGEMENTS ii

LIST OF TABLES iii

Chapter

I. INTRODUCTION 1

 Legal Aspects 3

 Impact on Nursing 5

 The Physicians Role 6

 Policy 8

 Statement of the Applied Research Question 10

 Objectives 10

 Criteria 11

 Assumptions 12

 Limitations 13

 Research Methodology 13

 Footnotes 17

II. PRESENTATION AND DISCUSSION OF DATA 22

 Characteristics of the Sample 22

 Results and Analysis of the Need for a Health Services
 Command "Do Not Resuscitate" (DNR) 29

 Results and Analysis of the General Form of a DNR Policy
 for Competent Terminally Ill Patients 32

 Results and Analysis of the General Form of a DNR Policy
 for Incompetent Terminally Ill Patients 35

 Results and Analysis of the Administrative Mechanicisms for
 Making DNR Decisions 37

 Footnotes 42

III. CONCLUSIONS AND RECOMMENDATIONS 43

 Conclusions 43

 Recommendations 46

APPENDIX

A. "DO NOT RESUSCITATE" POLICY FOR TERMINALLY ILL PATIENTS
 QUESTIONNAIRE 48

B. TABLES 55

C. U. S. NAVY GUIDELINES FOR ORDERS NOT TO RESUSCITATE 62

BIBLIOGRAPHY 71

ACKNOWLEDGEMENTS

The author wishes to acknowledge the assistance provided to him in the development of the Graduate Research Project.

The assistance of COL Frank S. Pettyjohn and COL Gary L. Fuller is noted for their efforts in reviewing and suggesting improvements to the research proposal.

The assistance of Ms. Janet Reddish and Ms. Lottie Groover is acknowledged for the patience they exercised in preparing the many drafts of the research proposal and the final document. Without their help, this research project certainly could not have been completed.

Accession For	
NTIS GRA&I	<input checked="" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By _____	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
A-1	



LIST OF ILLUSTRATIONS

FIGURE	PAGE
1 The General Outline of the Recommended Health Services Command "Do Not Resuscitate" Policy	47
 TABLES	
1 Specialty demographics of the Population of Physicians Selected for Study	23
2. Medical Schools Represented by Respondents to the DNR Questionnaire .	56
3. Age Distribution of the Respondents	25
4. Marital Status of Respondents	25
5. Physician Experience with Terminally Ill Patients	26
6. Current Physician Practice	26
7. Marital Status of Respondents	28
8. Sex Profile of Respondents	28
9. Racial Profile of Respondents	28
10. Results and Analysis of the Opinion of Responding Physicians Concerning the Need for a Health Services Command Policy Allowing the Writing of DNR Orders in the Chart.	30
11. Results and Analysis of Physician Opinion Concerning the General Form of a DNR Policy for terminally Ill, Competent Patients.	33
12. Results and Analysis of Physician Opinion Concerning the General Form of a DNR Policy for Terminally Ill, Incompetent Patients.	36
13. Results and Analysis of Physician Opinion Concerning the Administrative Mechanisms which Would Facilitate the Making of a DNR Decision	38
14. Chi Square Test for Independence of Specialty	58
15. Chi Square Test for Independence of Age	59
16. Results and Analysis of the Opinion of all Physicians who Responded to the DNR Questionnaire	60
17. Results and Analysis of the Opinions of Physicians who Favored a Health Services Command DNR Policy	61

LIST OF ILLUSTRATIONS (continued)

TABLES	PAGE
18. Results and Analysis of the Opinions of Physicians who did not Favor a Health Services Command DNR Policy	62

I. Introduction

One of the most difficult and dramatic situations a physician has to face is the decision to start or maintain resuscitation for the terminally ill patient.¹ All Americans must contend with the possibility that they may be kept alive beyond any hope of ever again functioning as a human being or relating to family and friends.² Before the days of modern technology, vital body functions could not be maintained artificially, therefore, when one essential body function ceased, others quickly followed. Prolonging life has always been the goal of medical practitioners, but there was formerly nothing that could be done when vital functions ceased.³

Today with the great advances in medical science many practitioners feel death is the symbol of failure. Death is perceived to be something that should not occur but rather should be postponed, if only temporarily, whenever possible.⁴ Postponing death to the last possible moment using modern resuscitative techniques has created social and medical dilemmas with ethical, moral, and legal ramifications for all the participants in this nation's health care system.

Documentation of a decision not to resuscitate a terminally ill patient in the medical record is an issue which has been debated in medical, legal, and theological circles for many years. In "Standards for Cardiopulmonary Resuscitation (CPR) and Emergency Cardiac Care (ECC)," the AMA recommends that the decision not to resuscitate the terminally ill patient be recorded on the

physician order sheet in the patients chart. By writing the order clearly in the record the AMA believes nursing and other personnel will definitely understand their responsibilities for initiating and participating in CPR.⁵ Currently the military medical community prohibits the use of written orders such as "Do Not Resuscitate (DNR)" or "No Code" in the patients medical record.⁶ Policy statements which address "no resuscitation" are in fairly widespread use in the civilian health care system.⁷ Opponents of written DNR policies feel that such policies place medical practitioners in positions where they have to "play God." Antagonists to DNR policies on these grounds undoubtedly would consider the administration of drugs and heart massage to revive a patient in cardiac arrest a natural part of living.⁸ In actual practice it may be that only a small minority of patients have everything possible done for them right up to the moment of death. The difficulty may not be with the general principle, but with how to arrange the details.⁹

It was not only the lack of detail in the military establishment's DNR policy, but also the lack of a requirement for a written DNR statement in the patients record that prompted this study. Interviews with the Commander, Executive Officer, Chief of Professional Services, and Chief, Department of Surgery, at the United States Army Community Hospital, Fort Stewart, Georgia^{10, 11, 12, 13} reinforced the need to determine the appropriateness and details of a DNR policy which might be applied in the military health care system. A December 1982 article in the U.S. News and World Report

reported that the debate over the prolongation of life in terminally ill patients using modern resuscitative techniques continues to rage in the civilian community.¹⁴ This article provided further stimulus to study the need and appropriateness of a DNR policy within the military.

Legal Aspects

Legal aspects of a DNR policy have been a major concern of civilian, state, and Federal health care providers. Society has established priorities by law around issues of automobile safety, cigarette advertising, use of certain pesticides, disposal of radioactive wastes, and provision of food for the hungry. All of these laws have had life and death implications, just as do decisions on prolonging life for particular patients. However, a decision about an individual's life is often much more dramatic than when the lives of unknown thousands are at stake.¹⁵

There is a consensus of opinion among the medical and legal profession on the question of how far a doctor must go to delay death. Physicians are obligated to prescribe ordinary but not extraordinary means to prolong life. Whether the treatment is ordinary or extraordinary depends on the individual case.^{16, 17, 18}

Ordinary is defined in law as the degree of skill and competence of the physician, which need not be of the highest nor the lowest, compared with that of other physicians of similar training practicing under similar circumstances.¹⁹ Extraordinary, on the other hand, is defined as:

"Whatever here and now is very costly or very unusual or very painful or very difficult or very dangerous, or if the good effects that can be expected from its use are not proportionate to the difficulty and inconvenience that are entailed."²⁰

Though definitions of extraordinary care are presented in the literature, there exists no absolute scale for judging the degree of extraordinariness. What is or is not extraordinary can only be judged in relation to the individual.²¹

Common law courts have never convicted a medical practitioner for shortening the life of a suffering terminal patient or for refusing to render life-sustaining aid.^{22, 23, 24} Of the three landmark cases which deal with the issue of prolonging the life of a terminally ill patient, only in the matter of Shirley Dinnerstein, Appeals Court of Massachusetts, June 1978, is the issue of DNR directly addressed.²⁵ The other two cases were in the matter of Karen Quinlan²⁶ and Superintendent of Belchertown State School vs Joseph Saikewicz.²⁷ The Quinlan case addressed the issue of withdrawing life support equipment after it was already in place. In the Saikewicz case, the issue was the terminating of treatment for a terminally ill 67 year old, profoundly retarded, institutionalized patient. In its written opinion, the Massachusetts Supreme Court stated that judicial intervention was appropriate in all cases to permit the withdrawal of life support for terminally ill patients.²⁸

The case of Mrs. Shirley Dinnerstein was begun to clear up the confusion generated by the Saikewicz decision requiring court involvement in life prolonging decisions. At issue in the Dinnerstein case was the requirement to obtain a court order before a physician could give a DNR order for an incompetent, terminally ill patient where next of kin and physician concur with the decision not to resuscitate.²⁹

Mrs. Dinnerstein, a 67 year old woman with terminal Alzheimers disease, was hospitalized following a crippling stroke. Both the patient's

immediate family and attending physician had agreed that in the event Mrs. Dinnerstein suffered a cardiac arrest, she would not be resuscitated. In an attempt to follow the precedent set in the Saikewicz opinion, the hospital and physicians petitioned the county probate court to determine the need for a court-approved DNR order. The probate court reported the findings and evidence to the Appeals Court of Massachusetts.³⁰

On June 30, 1978, the appeals court gave the opinion that, "...the law does not prohibit a course of medical treatment which excludes attempts at resuscitation in the event of cardiac or respiratory arrest and the validity of an order to that effect does not depend on prior judicial approval."³¹ The court further stated in the Dinnerstein case, "...presents a question peculiarly within the competence of the medical profession of what measures are appropriate to ease the imminent passing of an irreversibly, terminally ill patient in light of the patient's history and condition and the wishes of the family."³²

Though the Dinnerstein case decision was reached at a lower judicial level than either the Quinlan and Saikewicz cases, it is currently the legal authority upon which a DNR policy may be founded.^{33, 34, 35, 36}

Impact on Nursing

Lack of resuscitation policies is a perplexing source of conflict among many nurses.³⁷ Misgivings arise most frequently when no medical resuscitation decision for a particular patient has been made, and the nurse is torn between following an implied order to prolong life and ignoring it.³⁸ Quite frequently the nurse is the only attending medical professional in a position to respond to a patient who has a cardiac arrest. The nurse may be placed in this paradoxical position by conflicting written and verbal

instructions from physicians; by orders that conflict with hospital policy; by conflicting and inter-conflicting directions from patients, family members, and physicians; by their own conflicting perceptions and values; and finally by the absence of a clear, rational, and humane policy regarding resuscitation of the terminally ill. In settings where there is no DNR policy, it is not uncommon for nurses to be asked to use such tactics as "slow code," which means walk don't run to the telephone.³⁹ Often the lack of a written DNR policy is attributed to its cloudy legal status though many commentators in the field feel the legal status of DNR orders is quite clear.^{40, 41}

To help relieve some of the frustrations suffered by the nursing staff, Alexander and Brown, in separate articles, recommend that resuscitation decisions be made for every patient with a terminal illness. They believe the hospital has the responsibility to set the criteria for DNR orders and present them in nursing procedures manuals and other appropriate administration and medical staff manuals. Once these criteria and policies have been set out, then all the nursing staff should be familiarized with them.^{42, 43}

Brown and Alexander's recommendations are supported by numerous other authors.^{44, 45, 46, 47, 48}

The Physicians Role

Physicians who manage the care of terminally ill patients are constantly required to make decisions regarding the best treatment. A physician studies his patient, selects what he believes to be the best treatment and then makes the appropriate effort to explain and execute his recommendations. Usually these decisions have as their ultimate goal, the prolongation of life. For the terminal patient, the physician must choose

between a formula for the preservation life or a comfortable and dignified death.⁴⁹

Health care professionals must determine the point at which a patient's dying process has begun. There are no known clinical formulas for determining this point, since it is not necessarily associated with the patient's awareness of impending death or initial diagnosis of a fatal malady. In his deliberations concerning resuscitative efforts to be used to prolong the terminal patient's life, the physician must look for the point where the life curve takes a noticeable downward turn so dramatic that the possibilities for life are negligible.⁵⁰ This risk-filled decision concerning the onset of the dying process requires the physician to muster the courage and perhaps the legal protection to act upon it. At this point the physician has determined that further treatment can no longer influence the prognosis.^{51, 52, 53}

In caring for the competent patient, the physician has the duty to make it clear to the patient that there are available extraordinary means which may maintain his life. A physician is obligated to use these extraordinary measures if the patient requests that he do so.⁵⁴ The incompetent or unconscious patient requires, in most cases, a consultation with the family or guardian before life preserving decisions can be made. A physician should not withhold care without the agreement of the closest relatives or guardian of the patient.^{55, 56, 57, 58}

The case of lifesaving treatment for the defective infant requires some special consideration by the physician. A terminally ill patient will soon die, with or without extraordinary treatment regimens. The defective infant, on the other hand, if treated, can normally live for significant periods, unless the quality of his life affects its value, a judgement for

which there is no legal precedent.⁵⁹ The likelihood that treatment means life, should justify the procedure. When there is no hope of prolonging the child's life, then a life-saving procedure may be extraordinary and thus not required.⁶⁰

The Canadian Medical Association (CMA), at its annual meeting in 1974, passed a resolution designed to sanction its member physicians' decisions concerning the preserving of life for terminally ill patients. They resolved that it is appropriate, medically and ethically, for a physician to write a DNR order for terminal patients whose death seems imminent and inevitable.⁶¹

Physicians should feel that their decisions not to resuscitate are fully compatible with respect for the fullness of human-life.⁶² They must in the final analysis judge whether to try a given treatment based on an estimate of whether there is a reasonable hope of success in saving the patient's life.⁶³

Policy

Numerous mechanisms have been suggested for institutions to effect a policy for with-holding life-support or life-saving care. DNR policy alternatives range from the doctor alone making the decision, the doctor and patient or family, to committees composed of various members of the patient's health care team.^{64, 65} The first step toward an institutional DNR policy is presenting the problem to the policy making board of the hospital for study and resolution.^{66, 67}

Most of the policies suggested in the literature on the subject of DNR follow an outline similar to the one which follows:

1. In the case of the competent patient:
 - a. Discussion of relevant facts.
 - b. Reassessment of the order.
 - c. Patient requests to remove the order.
 - d. Provisions for reasonable mental and physical comfort.
2. If the patient is incompetent:
 - a. Discussion of the relevant facts with the appropriate family member or guardian, by the attending physician.
 - b. Consultation with another physician.
 - c. Reassessment of the order at reasonable intervals.
 - d. Provisions for the removal of the order by the appropriate family member or guardian.
3. In all cases the relevant facts^{68, 69, 70, 71, 72, 73} should be documented in the patients record.

Statement of the Applied Research Question

The material presented thus far suggests that health care facilities should have clearly stated policies concerning the utilization of "Do Not Resuscitate" orders. The researcher feels that the physicians who face life prolonging decisions involving terminally ill patients have an opinion concerning the need for a policy which authorizes written DNR orders in the patient's medical record. In addition, it is felt that physicians will have an opinion about the general form of a policy which will guide them in making the decision to write a DNR order.

The applied research question is:

- a. Do a significant proportion of U.S. Army physicians who have or are likely to make DNR decisions believe that a written policy authorizing the charting of DNR orders is needed?
- b. Of the physicians who favor a written DNR policy, what is their opinion regarding the general outline of such a policy?

Ultimately it is believed that a policy allowing the writing of DNR orders in the terminally ill patient's chart will improve the quality of medical care rendered to these patients. Patients who might have lingered in a vegetative state after numerous "codes" may be allowed to die in peace and dignity. It is believed the suffering and grief which is attendant upon the involved family members who must wait for the inevitable will be lessened.

Objectives

The objectives which must be achieved to accomplish this research project are as follows:

1. Determine the appropriate target populations of U.S. Army physicians from which to draw a sample.
2. Determine the minimum sample size of the population of Army physicians selected as the target group which will allow statistical inferences to be made.
3. Develop, distribute, and collect a questionnaire designed to poll the target population with regard to the issues surrounding the propriety of a DNR policy.
4. Collate data from the questionnaires which are returned.
5. Analyze the data using the appropriate statistical test.
6. Make inferences to determine if a significant number of physicians in the target population believe that a policy authorizing written DNR orders is appropriate for terminally ill patients.
7. Make inferences from the number of physicians who feel a DNR policy is required about the general form of such a policy.
8. Report findings to the Health Services Command.

Criteria

Physician opinion will be obtained using a survey questionnaire. The questionnaire will require yes or no responses. Inferences about the opinions obtained will be made using hypothesis testing about population proportions as described by Daniel.⁷⁴

The null hypothesis is 75 percent or less of Army's physicians who have or are likely to make DNR decisions favor a policy which allows recording DNR order in the medical record. The level of significance will be $\alpha = .05$.

Similar hypothesis tests will be used to make inferences based on the responses to the questions in the survey which deal with the general form of a DNR policy.

A Chi square test of independence will be used to test the null hypothesis that the physicians responses concerning the need for a DNR policy is independent of their specialty or aged $\alpha = .05$.⁷⁵ Descriptive statistics will be used to profile the sample group based on answers furnished to the first eight questions of the survey.

Assumptions

The determination of the minimum sample size to be used ($n=228$) in this research project required an estimate of the population proportion (p).⁷⁶ A notion for the upper bound of (p) was obtained from a review of similar studies to the one contemplated in the literature. The general consensus was that 60 to 90 percent of the physicians polled believed that policies were needed to describe the practice of writing DNR orders.^{77, 78, 79, 80, 81, 82} An estimate of the population proportion (p) favoring a policy for written DNR orders, was derived as one half the difference in the extremes found in the literature or 75 percent. This estimate of (p) will be assumed to apply to all the issues related to DNR decisions.

It will be assumed that the physicians responses will represent their true feelings about the issues addressed by each question.

Limitations

Several related medicolegal issues will not specifically be distinguished in this study. These issues include euthanasia, "mercy killing," the definition of death, living wills, the right to die and natural death acts.

Automated data handling equipment is not available to the researcher.

Research Methodology

A survey questionnaire will be sent to a random sample of U.S. Army physicians who meet the following criteria:

1. Those who have been or are currently in types of practices that provide patients in life threatening or terminal illness situations.⁸³
2. Those in a position to make independent judgments about withholding life support.

A copy of the survey questionnaire and its cover letter is at the appendix. A separate pre-addressed postcard to acknowledge return of the questionnaire will be included in the packet of materials sent to physicians.

The size of the sample ($n=228$) was determined using the formula⁸⁴ for sampling a finite population without replacement expressed as follows:

$$n = \frac{Nz^2 pq}{d^2 (N-1) + z^2 pq}$$

The size of the population of interest (N) was determined to be 2219.⁸⁵ A one sided hypothesis test is envisioned in the data analysis, hence, the Z score used will be $Z=1.645$ with $\alpha = .05$. The desired confidence interval width (d) was set equal to .05. An estimate of the population proportion (p) was stated previously to be 75 percent. The q term equates to $1-p$ or .25.

The sample will be sufficiently large to allow the use of a normal approximation of a hypergeometric distribution, rather than a binomial distribution since sampling will be without replacement.⁸⁶ If the computed value of the test statistic (Z score) is equal to or greater than 1.645 then the null hypothesis will be rejected. It will then be inferred that more than 75 percent of the target population of physicians believe that a policy allowing written DNR orders in the patient's chart is appropriate. The method of arriving at the estimate of the population proportions will be described in the assumptions section.

The list⁸⁷ from which the names of the physicians in the population of interest was obtained is arranged in order of specialty skill identifier (SSI) and grade. To insure randomness in the sampling process, the systematic sampling technique⁸⁸ was used to select the individuals to whom questionnaires will be mailed. A sample of 912 names will be drawn, which is four times the number needed to obtain the minimum sample size.

Responses to questions 1 thru 8 in the questionnaire will be used to develop a demographic profile of the respondents using descriptive statistics. Analysis of questions 9 thru 15 will test the opinion of the population of physicians in the study concerning the issue of whether there should be a DNR policy. Sample proportions derived from totalling individual responses to each questions will be used to test the null hypothesis that 75 percent or less of the population of physicians support a policy allowing DNR orders to be written in the chart. A significance level of .05 will be used on all hypothesis tests throughout the study.

A Chi square test of independence will be performed using the actual numbers of yes and no responses to questions 9 thru 15. These independence tests will have the following null hypothesis:

- a. Responses to the question are independent of the physicians subspecialty.
- b. Responses to the question are independent of the physicians age.

Sample population proportions derived from the responses to questions 16 thru 24 will be tested for significance using the same testing methodology and level of significance as in the analysis of questions 9 thru 15. The analysis of questions 16 thru 24 will address inferences about how DNR decisions for competent and incompetent patients will be handled.

The final portion of the analysis will test the significance of physician opinion about questions 25 thru 31. Inferences from these questions will suggest an administrative mechanism for making the DNR decision. Question 32 was included to determine if physicians felt their education had prepared them to advise patients about DNR decisions.

The results of the study will determine if a significant number of U.S. Army physicians, who are now making or have made decisions about prolonging the life of terminally ill patients, favor a policy for the use of written DNR orders, as well as, the general form of such a policy. If it can be inferred that over 75 percent of the Army's physicians favor the writing of DNR orders, then a recommendation will be made to Health Services Command (HSC) to adopt such a policy. The general form of the recommended policy will

be included in the recommendation. Failure to find a significant number of physicians in favor of a DNR policy will also be reported to HSC with a recommendation that written DNR orders and policies may not improve the practice of medicine within the military health care system.

FOOTNOTES

¹M.A.Nalda, "The Validity of Starting Resuscitation," in Recent Progress In Anesthesiology and Resuscitation, ed. A. Arias et al (New York: Americal Elsevier Publishing Company, 1975), p. 749.

²Margaret Mead, "The Right to Die," Nursing Outlook 16 (October 1968): 22.

³Nathan Hershey, "On the Question of Prolonging Life," American Journal of Nursing 71 (March 1971): 521.

⁴Kay Butchart et al, "In the Midst of Death," Nursing Times 75 (August 23, 1979): 1430.

⁵"Standards for Cardiopulmonary Resuscitation (CPR) and Emergency Cardiac Care (ECC)," Journal of the American Medical Association 244 (1 August 1980): 507.

⁶Phillip C. Breunle, "Potential Graduate Research Projects for FY 82-83 HCA Residents," Health Care Studies Division Disposition Form, Academy of Health Sciences, Fort Sam Houston, Texas, 10 June 1982: 83-37.

⁷Kenneth G. Evans, "No Resuscitation Order - An Emerging Consensus," Canadian Medical Association Journal 125 (15 October 1981): 895.

⁸Melba W. Shepard, "This I Believe: About Questioning the Right to Die," Nursing Outlook 16 (October 1968): 23.

⁹Robert S. Morison, "Dying," Scientific American 229 (September 1973): 58.

¹⁰Interview with Major Virgil T. Deal, Chief, Department of Surgery, United States Army Community Hospital, Fort Stewart, Georgia, 16 December 1982.

¹¹Interview with Colonel Gary L. Fuller, Executive Officer, United States Army Community Hospital, Fort Stewart, Georgia, 14 December 1982.

¹²Interview with Colonel Frank S. Pettyjohn, Commander, United States Army Community Hospital, Fort Stewart, Georgia, 14 December 1982.

¹³Interview with Colonel Herbert E. Segal, Chief, Professional Services, United States Army Community Hospital, Fort Stewart, Georgia, 16 December 1982.

¹⁴Abigail Trafford, "Doctors Dilemma: Treat or Let Die?," U.S. News and World Report, 6 December 1982, p. 53-6.

¹⁵Hershey, p. 522.

¹⁶Frank J. Ayd, Jr., "The Hopeless Case," Journal of the American Medical Association 181 (29 September 1962): 1099-1102.

¹⁷John A. Robertson, "Involuntary Euthanasia of Defective Newborns: A Legal Analysis," in Death, Dying and Euthanasia, ed. Dennis J. Horan and Daniel Mall (Frederick, Maryland: University Publications of America, Inc., 1977), p. 162.

¹⁸David H. Smith, "Some Ethical Considerations in Caring for the Dying," in ANA Clinical Sessions: American Nurses' Association 1974 San Francisco, (New York: Appleton-Century-Crofts, 1974), p. 179.

¹⁹Sheila Taub, "Withholding Treatment from Defective Newborns," Law, Medicine, and Health Care 10 (February 1982): 7.

²⁰E.F. Healy, Medical Ethics, (Chicago: Loyola University Press, 1956), p. 59.

²¹Morison, p. 59.

²²Dennis J. Horan, "Euthanasia as a Form of Medical Management," in Death, Dying and Euthanasia ed. Dennis J. Horan and David Mall (Frederick, Maryland: University Publications of America, 1977), p. 210.

²³Joseph Fletcher, "Ethics and Euthanasia," American Journal of Nursing 73 (April 1973): 671.

²⁴Robertson, p. 165.

²⁵In the matter of Dinnerstein, Massachusetts Court of Appeals, 380 N.E. 2d 134 (1978).

²⁶In the matter of Quinlan, New Jersey Supreme Court, 70 N.J. 10, 355 A. 2d 647 (1976).

²⁷Superintendent of Belchertown State School V. Joseph Saikewicz, Massachusetts Supreme Court, 370 N.E. 2d 417 (1977).

²⁸Ibid.

²⁹Dinnerstein, p. 134-36

³⁰Ibid.

³¹Ibid., p. 139.

³²Ibid.

³³Ronald B. Schram, John C. Kane, Jr., Daniel T. Roble, "No Code Orders: Clarification in the aftermath of Saikewicz," New England Journal of Medicine 299 (19 October 1978): 877.

- ³⁴"Standards," 506.
- ³⁵Joseph G. Zimring, "Medical Judgment versus Court Imposed Rules," New York State Journal of Medicine 82 (May 1981): 952.
- ³⁶Maureen Cushing, "No Code Orders: Current Developments and the Nursing Directors Role," Journal of Nursing Administration 11 (April 1981): 25.
- ³⁷Mary Alexander, "Resuscitation A Matter of Life and Death ... A Nurse's Viewpoint on Resuscitation in the Terminally Ill," Nursing Mirror 149 (December 1979): 26.
- ³⁸Hershey, p. 521.
- ³⁹Leah L. Curtin, "The Prostitution of CPR," Supervisor Nurse 10 (April 1979): 7.
- ⁴⁰"Barbara's Resuscitation Dilemma," RN 42 (May 1979): 106.
- ⁴¹Barbara R. Huttman, "No Code, Slow Code, Show Code?," American Journal of Nursing 82 (January 1982): 133.
- ⁴²Alexander, p. 26.
- ⁴³Judith R. Brown, "No Written Order for No Code," Nursing 11 (December 1981): 94.
- ⁴⁴Lawrence M. Lampton and Danial H. Winship, "The No Code Blue Issue: Missouri is not Massachussets," Missouri Medicine 76 (May 1979): 261.
- ⁴⁵Zimring, p. 951.
- ⁴⁶John Goldenring, "Code or No Code Decision," New England Journal of Medicine 300 (3 May 1979): 1058.
- ⁴⁷Jane Greenlaw, "Order Not to Resuscitate: Dilemma for Acute Care as Well as Long Term Care Facilities," Law, Medicine and Health 10 (February 1982): 30.
- ⁴⁸J. Gary Grant, "Code or No Code Decisions," New England Journal of Medicine 300 (3 May 1979): 1059.
- ⁴⁹Norman K. Brown, et al., "The Preservation of Life," Journal of the American Medical Association 211 (5 January 1970): 79.
- ⁵⁰Smith, p. 187.

⁵¹Paul Ramsey, "On (Only) Caring for the Dying," in *Ethical Issues in Death and Dying*, ed. Tom L. Beauchamp and Seymour Perlin (Engelwood Cliffs, N.J.: Prentice-Hall, Inc., 1978): pp. 169-70.

⁵²Alexander, p. 26.

⁵³Hershey, p. 521.

⁵⁴Ayd, P., 1101

⁵⁵Ramsey, p. 173.

⁵⁶Steven S. Spencer, "Sounding Board: Code or No Code, A Legal Opinion," New England Journal of Medicine 300 (8 January 1979): 139.

⁵⁷Morison, p. 57.

⁵⁸Alexander, p. 27.

⁵⁹Glitman V. Cosgrove, 49 N.J. 22, 227 A. 2d 689 (1967).

⁶⁰Robertson, p. 163.

⁶¹Evans, p. 892.

⁶²Leonard J. Weber, "Ethics and Euthanasia: Another View," American Journal of Nursing 23 (July 1973): 1231.

⁶³Ramsey, p. 169.

⁶⁴Hershey, p. 522.

⁶⁵George Spelvin, "Should No Code be a Death Sentence," RN 44 (November 1981): 94.

⁶⁶Diane C. Adler, "No Code-The Unwritten Order," Heart & Lung 6 (February 1977): 213.

⁶⁷Mitchell T. Rabkin, Gerald Gillerman, Nancy R. Rice, "CPR Policies: The Art of the Possible, Orders not to Resuscitate," Supervisor Nurse 10 (August 1979): 18.

⁶⁸Aileen McPhail et al., "One Hospital's Experience with a Do Not Resuscitate Policy," Canadian Medical Journal 125 (15 October 1981): 835.

⁶⁹William J. Gargaro, "Cancer Nurses and No Code Orders," Cancer Nursing 2 (February 1979): 63.

⁷⁰Jerry B. Wilson, Death By Decision (Philadelphia: The Westminster Press, 1975), p. 176-7.

⁷¹Cushing, p. 29.

⁷²Alexander, p. 26.

⁷³Kevin M. McIntyre, "Mediolegal Aspects of Decision Making in Resuscitation and Life Support," Cardiovascular Reviews & Reports 4 (January 1983): p. 49.

⁷⁴Wayne W. Daniel and James C. Terrell, Business Statistics, 2d ed. (Boston: Houghton Mifflin Co., 1979) p. 225.

⁷⁵Ibid., p. 392.

⁷⁶Ibid., p. 180.

⁷⁷McPhail, p. 832.

⁷⁸Diana Crane, The Sanctity of Social Life: Physicians Treatment of Critically Ill Patients (New York: Russell Sage Foundation, 1975), p. 202.

⁷⁹Louis S. Baer, "Cardiopulmonary Resuscitation After Age 65," American Journal of Cardiology 43 (May 1979): 1065.

⁸⁰Elizabeth Swenson, Joyce Matsura, and Ida M. Martinson, "Effects of Resuscitation for Patients with Metastatic Cancers and Chronic Heart Disease," Nursing Research 28 (May/June 1979): 152.

⁸¹Harold J. Wershow, Ferris J. Ritchey, and Thomas H. Alphin, "Physicians Opinions Toward Legislation Defining Death and Withholding Life Support," Southern Medical Journal 74 (February 1981): 215-18.

⁸²Norman K. Brown, p. 76.

⁸³Military Personnel Center, Department of the Army, "AMEDD Officer Listing MEDD-333 Part 6 Officer Specialty/Grade Listing," November 1982: pp. 431-802.

⁸⁴Daniel, p. 180.

⁸⁵Military Personnel Center, p.431-802.

⁸⁶Daniel, p. 142.

⁸⁷Military Personnel Center, p.431-802

⁸⁸Daniel, pp. 495-8.

II. PRESENTATION AND DISCUSSION OF DATA

Characteristics of the Sample

Questionnaires were mailed to 912 randomly selected United States Army physicians of which 517 (56.7 percent) of these were returned. Table 1 describes the physicians specialties which were sampled in detail. It will be noted in Table 1 that more physicians in some specialties returned questionnaires than were sent them in the first place. The list of physicians from which the sample was selected reflected a physician's current primary specialty skill identifier (SSI). The primary SSI determined if a physician fell into a particular group of specialists. Some physicians may have been practicing in a secondary specialty or indicated the specialty for which they were in training as residents or fellows.

Respondents indicated they had attended a total of 122 different medical schools located throughout the United States. All of the respondents who indicated they had graduated from medical schools outside the United States were grouped together as foreign medical school graduates. This group included 37 physicians. It was envisioned that the data collected in the questionnaire might at some future date be analyzed using automated equipment. In such an analysis, medical schools would be grouped on a regional basis such as southwest or southeast and the responses tested for independence of geographical area of training. Table 2 located in Appendix B lists all the medical schools from which the respondents received their training, as well as, the number in the survey from each school.

TABLE 1

SPECIALTY DEMOGRAPHICS OF THE POPULATION OF PHYSICIANS
SELECTED FOR STUDY

Specialty	Total Number in Specialty	Number sent questionnaire	Percent of Specialty Sampled	Number of Responses	Percent of Sample that Responded
Anesthesiology	94	38	40.4	16	42.1
Cardiology	36	16	44.4	21	*
Family Practice	304	118	38.8	77	65.3
Gastroenterology	19	6	31.5	11	*
General Surgery	319	123	38.6	61	49.6
Internal Medicine	576	231	40.1	83	35.9
Neuro Surgery	25	10	40.0	5	50.0
Obstetrics/Gynecology	239	124	51.9	44	35.5
Ongology	9	9	100	20	*
Orthopedic Surgery	152	59	38.8	35	59.3
Pediatrics	347	131	37.8	66	50.4
Pediatric Cardiology	5	4	80.0	4	100.0
Thoraic Surgery	25	12	48.0	15	*
Urology	69	31	44.9	15	48.4
Other	--	--	--	40	--
No Response	--	--	--	4	--
TOTAL	2219	912	41.1	517	56.7

*More responses were received from physicians claiming the particular specialty than were sent questionnaire.

Physician experience was measured in terms of age, years since graduation from medical school and the number of terminally ill patients for which the physician had served as the primary medical treatment manager. The age distribution of the respondents is outlined in Table 3. The mean age of the respondents was rounded to 34 years. Most of the physicians (79.4 percent) responding were forty years or younger.

Physician experience in the practice of medicine is depicted in Table 4. Approximately two thirds (66.3 percent) of the physicians responding had ten years or less experience as practicing physicians. Experience in the handling of terminally ill patients was measured by asking physicians how many of these type patients had they provided primary medical management. Table 5 depicts the profile of the sampled physicians in this area. Only seven percent of the respondents claimed to have no experience with the primary medical management of terminally ill patients or gave no response. The inquiry did not define when in the physician's career encounters with the terminally ill patients had occurred.

Physicians were asked to indicate their current practice either as a resident, full time physician on hospital staff, or administrator/commander. Table 6 presents the details of the physicians' responses. It will be noted that two other categories were added to the table which were not solicited on the questionnaire. Thirty one (6 percent) physicians placed themselves into the categories of full time research or fellow, by writing in these responses on the questionnaire. The majority of physicians responding to the questionnaire (68.5 percent) were engaged as full time physicians.

TABLE 3
AGE DISTRIBUTION OF RESPONDENTS

<u>AGE GROUP</u>	<u>NUMBER</u>	<u>PERCENT</u>
21-25	1	.2
26-30	79	15.3
31-35	204	39.5
36-40	126	24.4
41-45	48	9.3
46-50	30	5.8
51-55	17	3.2
56-60	9	1.7
60	1	.2
No response	2	.4

TABLE 4

PHYSICIAN EXPERIENCE IN THE PRACTICE OF MEDICINE MEASURED IN TERMS
OF YEARS SINCE GRADUATION FROM MEDICAL SCHOOL

<u>Range of Years</u>	<u>Range of Years</u>	<u>Number of</u>	<u>Percent</u>
82-78	1.5	133	25.7
77-73	6-10	210	40.6
72-68	11-15	79	15.3
67-63	16-20	43	8.3
62-58	21-25	30	5.8
57 and earlier	25	18	3.5
No Response	--		4.8

TABLE 5
 PHYSICIAN EXPERIENCE WITH TERMINALLY ILL PATIENTS

<u>Number of Terminal Patients Managed</u>	<u>Number of Physicians</u>	<u>Percent</u>
0	21	4.1
1-24	228	44.1
25-49	67	13.0
50-74	63	12.2
76-100	36	7.0
101	87	16.8
No Response	15	2.9

TABLE 6
 CURRENT PHYSICIAN PRACTICE

<u>Practicing As A</u>	<u>Number</u>	<u>Percent</u>
Resident	83	16.1
Full time Physician	354	63.5
Administrator/Commander	48	9.3
Fellow	22	4.2
Full-time Research	9	1.7
No Response	1	.2

Marital status, sex and race information was solicited from the sample population. Tables 7, 8, and 9 give the numerical profiles of the respondents in this area. A consolidated view of these tables indicates more than 85 percent of the respondents were married, white males.

Responses to all questions were tested as described in the research methodology. Population proportions were deemed to be significantly greater than 75 percent if the calculated Z score using techniques described by Daniel and Webster was more than 1.645. Therefore, proportions which are described as significant in the narrative description can be assumed to have met the above criteria. The remainder of this chapter will be devoted to a discussion and presentation of the statistical results of the survey.

TABLE 7
MARITAL STATUS OF RESPONDENTS

<u>STATUS</u>	<u>NUMBER</u>	<u>PERCENT</u>
Single	49	9.5
Married	442	85.5
Divorced/Separated	24	4.6
Widowed	0	0
No Response	2	.4

TABLE 8
SEX PROFILE OF RESPONDENTS

<u>SEX</u>	<u>NUMBER</u>	<u>PERCENT</u>
Male	482	93.2
Female	33	6.4
No response	2	.4

TABLE 9
RACIAL PROFILE OF RESPONDENTS

<u>RACE</u>	<u>NUMBER</u>	<u>PERCENT</u>
Black	28	5.4
White	448	86.7
Other	36	6.9
No Response	5	1.0

Results and Analysis of the Need for a Health Services Command "Do Not Resuscitate" Policy

Questions nine through fifteen on the questionnaire deal with the issue of whether or not Health Services Command (HSC) needs a policy concerning the writing of "Do Not Resuscitate" orders in a terminally ill patients chart.

Table 10 provides a complete description of the statistical analysis of the responses to these questions.

A significant number (85.1 percent) of physicians favored an HSC policy allowing the writing of DNR orders in the terminally ill patients chart. Similarly, a significant number (81.6 percent) felt writing DNR orders was good medical practice. A relatively large (77.4 percent), though not significant, number of respondents did indicate they had given verbal DNR orders to the nursing staff. Physicians who had actually written DNR orders in the chart (58.4 percent) did not represent a significant number under the criteria established. Question thirteen had a significant number of physicians (81.8 percent) responding in the affirmative concerning the positive effect that a policy allowing written DNR orders might have on physician-nurse relationships.

It was thought that the act of writing DNR orders was so emotional that even if there was a policy which allowed such order to be written, that physicians might not use it. Question fourteen indicates that a significant number (92.8 percent) of physicians in the population of interest would write DNR orders if allowed.

TABLE 10
 RESULTS AND ANALYSIS OF THE OPINION OF RESPONDING PHYSICIANS CONCERNING THE
 NEED FOR A HEALTH SERVICES COMMAND POLICY ALLOWING THE WRITING
 OF DNR ORDERS IN THE CHART

QUESTION NUMBER	QUESTION	YES	NO	NO RESPONSE	PERCENT YES	CALCULATED Z SCORE n=517	SIGNIFICANT	P VALUE
9.	Do you favor a Health Services Command written command policy permitting "No Code" or "Do Not Resuscitate" orders to be written in the chart?	440	64	13	85.1	5.30	Yes	< .001
10.	Would you consider the writing of a "Do Not Resuscitate" order in a terminally ill patient's records good medical practice with or without legal precedent?	422	85	10	81.6	3.47	Yes	< .001
11.	Have you ever given verbal orders to the nursing staff not to resuscitate a patient?	400	116	1	77.4	1.26	No	.1038
12.	Have you ever written in the chart an order which in effect means "Do Not Resuscitate" or "No Code"?	302	213	2	58.4	-8.72	No	> .999
13.	Do you believe that a "Do Not Resuscitate" policy would have a positive effect on physician-nurse relationship?	423	70	24	81.8	3.58	Yes	< .001
14.	If Health Services Command had a policy authorizing the charting of "Do Not Resuscitate" orders would you be willing to write such an order?	480	32	5	92.8	9.37	Yes	< .001
15.	Do you believe a clear "Do Not Resuscitate" policy would reduce the chance of irresponsible decision-making as pertains to withholding heroic life-saving measures?	389	107	21	75.2	.127	No	.4102

Question fifteen sought to collect physician opinion about the chance for irresponsible decision-making with regard to the withholding of heroic life-saving measures. A significant number of respondents did not respond in the affirmative to question fifteen. Therefore, physicians in the population of interest may feel that a written DNR policy will reduce the chance for irresponsible decision-making as pertains to the withholding of heroic life saving measures.

In addition to the previous analysis a Chi square test of independence of specialty and age was performed using the responses of all the sampled physicians to questions nine through fifteen. The results of these Chi square test is depicted in Tables 14 and 15 in Appendix B. Non respondents were not included in this analysis and n values, were adjusted accordingly.

In testing for independence of specialty the responses of the neuro surgeons and pediatric cardiologist were not included in the analysis. The expected frequency of the no responses in these specialties was always less than one, which possibly threatens the validity of the Chi square test¹. In addition, the result of the Chi square test for independence of specialty in question fourteen is ignored for the same reason.

It was found that responses to questions nine through fifteen, excepting question fourteen, may be independent of specialty at the .05 level of significance.

The Chi square test of independence of age resulted in a determination that the responses to questions eleven, twelve, and fifteen were not independent of age at the .05 level of significance. The results of the analysis of question fourteen were not considered in the study since one of the expected frequencies was less than one.² Responses to questions nine, ten, and thirteen may be independent of age.

Results and Analysis of the General Form of a DNR Policy for Competent Terminally Ill Patients

Questions sixteen through twenty solicited opinions from physicians concerning their feelings about the general form of a DNR policy which would be used to guide them in making decisions for competent terminally ill patients. Responses to these questions were analyzed and tested for significance using three different categories of responses.

Hypotheses were tested using the opinions of all the physicians in the sample, the opinions of the physicians who favored a policy allowing the writing of DNR orders, and the opinions of physicians who did not favor such a policy. The results of these statistical tests are presented in Table 11. A more complete table of the calculations used to derive the data in Table 11 may be found in Tables 16, 17, and 18 of Appendix B. The tables also provide the detailed analysis of other sections of the questionnaire, the discussion of which will be presented in subsequent sections of this chapter.

A significant number of physicians in the population of interest can be expected to favor a discussion of the relevant facts concerning the direction further treatment should take, assuming the patient is terminally ill, no matter what their opinion about the need for a DNR policy.

Physicians in all three categories used in Table 11 felt, significantly, that the patient's requests concerning the use of all measures which would prolong his life should not be overruled.

TABLE 11

RESULTS AND ANALYSIS OF PHYSICIAN OPINION CONCERNING THE GENERAL FORM OF A DNR POLICY FOR TERMINALLY ILL, COMPETENT PATIENTS

QUESTION	ALL RESPONDENTS		ANSWERED YES TO QUES. #9		ANSWERED NO TO QUES. #9	
	PERCENT YES n=517	STIGFI-CANT/ P VALUE	PERCENT YES n=440	STIGFI-CANT/ P VALUE	PERCENT YES n=64	STIGFI-CANT/ P VALUE
16 Do you believe the relevant facts should be discussed with the patient to determine the direction in which treatment should proceed?	98.1	Yes <.001	98.2	Yes <.001	98.4	Yes <.001
17 If the patient requests that all measures necessary be used to prolong his life, do you believe his wishes should be honored?	92.1	Yes <.001	92.5	Yes <.001	90.6	Yes .0019
18 If the patient elects to allow you to write a "Do Not Resuscitate" order, do you believe an interval should be specified for reassessment of the order?	78.9	Yes .0197	80.2	Yes .006	75.0	No .8079
19 In circumstances where the patient's condition changes should a nurse or another physician be allowed to temporarily remove the "Do Not Resuscitate" order without the advice of the primary physician?	65.2	No >.999	66.1	No >.999	56.3	No >.999

TABLE 11 (continued)

QUESTION	ALL RESPONDENTS		ANSWERED YES TO QUES. #9		ANSWERED NO TO QUES. #9	
	PERCENT YES n=517	SIGNIFI- CANT/ P VALUE	PERCENT YES n=440	SIGNIFI- CANT/ P VALUE	PERCENT YES n=64	SIGNIFI- CANT/ P VALUE
20 While the "Do Not Resuscitate" order is in effect should all reasonable measures be provided for the physical and mental comfort of the patient?	99.2	Yes < .001	100.0	Yes < .001	95.3	Yes < .001

On the issue of including a specified interval for reassessment of the DNR order, a significant number of all the respondents and physicians who favored a policy for written DNR orders believed such a comment was needed. Physicians who do not favor a DNR policy may feel that an interval for reassessment is required in a DNR order.

Opinions about the temporary removal of DNR orders did not yield significant affirmative responses in any of the three categories depicted in Table 11. It may be that physicians in the population of interest do not believe that another physician or nurse be allowed to remove a DNR order without the advice of the primary physician. Some physicians crossed out the word nurse on their questionnaire then checked the yes answer, indicating that they would go along with another physician changing the DNR order.

A significant number of physicians believed that all reasonable measures be provided for the physical and mental comfort of the patient after the DNR order is written.

Results and Analysis of the General Form of a DNR Policy for Incompetent Terminally Ill Patients

Questions twenty one through twenty four solicited opinions from the sampled physicians concerning their feelings about the general form of a DNR policy which would be used to guide them in making decisions for incompetent terminally ill patients. Table 12 provides a concise representation of the results of the responses to questions twenty one through twenty four using the same format as Table 11.

TABLE 12

RESULTS AND ANALYSIS OF PHYSICIAN OPINION CONCERNING THE GENERAL FORM OF A DNR POLICY FOR TERMINALLY ILL, INCOMPETENT PATIENTS

#QUESTION	ALL RESPONDENTS PERCENT YES n=517		ANSWERED YES TO QUES. #9 PERCENT YES n=440		ANSWERED NO TO QUES. #9 PERCENT YES n=64	
	STIGNIFI- CANT/ P VALUE	Yes P VALUE	STIGNIFI- CANT/ P VALUE	Yes P VALUE	STIGNIFI- CANT/ P VALUE	Yes P VALUE
21 Should the relevant facts in the case be discussed with the appropriate family member or guardian?	98.8 Yes <.001	98.9 Yes <.001	100.0 Yes <.001	98.9 Yes <.001	100.0 Yes <.001	98.9 Yes <.001
22 Should a "Do Not Resuscitate" policy specify the appropriate family members in priority who can make decisions for the incompetent patient?	76.4 No .1996	77.3 No .134	71.9 No .719	77.3 No .134	71.9 No .719	77.3 No .134
23 Should the reassessment criteria of a "Do Not Resuscitate" order for the incompetent patient be the same for a competent patient?	79.5 Yes .0091	80.9 Yes .002	68.8 No .8749	80.9 Yes .002	68.8 No .8749	80.9 Yes .002
24 Should a request, at anytime, from an appropriate family member or guardian to remove the DNR order to be implemented without question?	57.1 No >.999	57.0 No >.999	56.3 No >.999	57.0 No >.999	56.3 No >.999	57.0 No >.999

It can be inferred that a significant number of physicians in the population of interest favor a provision in a DNR policy for discussion of the relevant facts in the case with the appropriate family member or guardian.

A significant number of physicians may not favor attempting to specify the appropriate family members in priority who can make decisions for the incompetent patient. A significant number of physicians can be expected to prefer that the reassessment criteria for a DNR order be the same for an incompetent patient as for a competent patient. Physicians who do not favor a DNR policy at all may favor the same reassessment criteria being applied to incompetent patients as for competent patients. Physicians in the population of interest may favor the honoring of a request by the appropriate family member or guardian to remove a DNR order without question.

Results and Analysis of the Administrative Mechanisms for Making DNR Decisions

Questions twenty five through thirty one on the questionnaire solicited physician opinion regarding some of the administrative mechanisms which should be included in a DNR policy. Table 13 provides a concise display of the results of the statistical analysis of the responses to these questions.

The hypothesis test in question twenty five was that 75 percent or less of the physicians will answer in the negative. The alternative was that more than 75 percent of the physician will answer no to the question. From Table 13 it can be inferred that more than 75 percent of the physicians in the population of interest believe that the decision not to resuscitate a patient should not be

TABLE 13
RESULTS AND ANALYSIS OF PHYSICIAN OPINION CONCERNING THE ADMINISTRATIVE MECHANISMS WHICH WOULD FACILITATE THE MAKING OF A DNR DECISION

#	QUESTION	ALL RESPONDENTS PERCENT YES n=517	SIGNIFI- CANT P VALUE	ANSWERED YES TO QUES. #9 PERCENT YES n=440	SIGNIFI- CANT P VALUE	ANSWERED NO TO QUES. #9 PERCENT YES n=64	SIGNIFI- CANT P VALUE
25	Do you believe a decision not to resuscitate who is terminally ill should be solely the physician's?	*83.8	Yes <.001	85.2	Yes <.001	78.1	No .281
26	Should consultation with at least one other physician be required before a "Do Not Resuscitate" order is written?	66.3	No >.999	65.9	No >.999	65.6	No .9582
27	If a committee were used to decide on "Do Not Resuscitate" order should all members of the patients care team be involved?	47.2	No >.999	48.2	No >.999	43.8	No >.999
28	Do you feel a committee approach to a "Do Not Resuscitate" decision would be too cumbersome and time consuming?	73.5	No .764	74.5	No .5871	68.8	No .8749

*Percent NO for number 25 only

Table 13 (continued)

#	QUESTION	ALL RESPONDENTS		ANSWERED YES TO QUES. #9		ANSWERED NO TO QUES. #9	
		PERCENT YES n=517	SIGNIFI- CANT P-VALUE	PERCENT YES n=440	SIGNIFI- CANT P-VALUE	PERCENT YES n=64	SIGNIFI- CANT P-VALUE
29	Do you believe a "Do Not Resuscitate" policy should address children born with severe birth defects?	81.2	Yes <.001	82.0	Yes <.001	78.1	No .281
30	Would you be highly selective in giving your patients information about DNR orders?	65.4	No >.999	64.1	No >.999	73.4	No .6141
31	Would you provide the patient with an informational paper in regard to the use of "Do Not Resuscitate" orders?	51.1	No >.999	52.2	No >.999	45.3	No >.999

the physicians alone. Answers to question twenty six infer that physicians believe that consultation with at least one other physician may be required before a DNR decision is made.

Questions twenty seven and twenty eight dealt with the committee approach to DNR decision making. Based on the responses of the sample physicians, it may be that all members of the patients care team should be included in a DNR committee. Question twenty seven was the only question which did not achieve at least a simple majority of respondents in favor of the proposal.

Physicians in the population of interest may feel that a committee approach to a DNR decision would be too cumbersome and time consuming, as the positive responses to question twenty eight were not found to be significant.

On the question of addressing children born with severe birth defects in a DNR policy, a significant number of physicians felt that guidance should be included.

The answer to question thirty indicates that physicians may be highly selective in giving their patients information about DNR orders.

On the subject of giving terminally ill patients an informational paper in regard to the use of DNR orders, it may be that physicians favor this but not significantly. Respondents were more evenly split on this issue than any other in the survey.

Question thirty two was included to get an opinion about how well physicians felt their education had prepared them to advise patients and families about DNR orders. Positive responses to this question numbered 373 (72.1 percent). Analysis of the responses revealed the physicians may feel

their education was adequate in this area, but not significantly.

The statistical analysis will now make it possible to reach some conclusions with regard to the opinions of the population of United States Army Physicians of interest about the need for and general outline of a DNR policy.

FOOTNOTES

1. Wayne W. Daniel and James C. Terrell, Business Statistics, 2d ed. (Boston: Houghton Mifflin Co., 1979) p. 394.

2. Ibid.

III. Conclusions and Recommendations

Conclusions

The results of the survey indicate that more than 75 percent of United States Army physicians with the SSI's of interest believe that Health Services Command should have a policy which allows them to write DNR orders in the charts of terminally ill patients. This group of physicians believes further that the writing of DNR orders represents good medical practice. While the giving of verbal DNR orders was not found to be a significant practice under the criteria of the study, the raw percentage of physicians in the sample who acknowledged using this technique was 77.4 percent. The critical percentage for significance in the sample was calculated to be 78.1 percent, a difference of .7 percent.

It can be concluded from the survey that a policy allowing written DNR orders would have positive effects on the physicians relationship with nurses. It is felt from the review of the literature, as well as, personal interviews that a great deal of conflict is created between physicians who give verbal DNR orders and the nurses who are likely to have to carry them out.

If a policy is adopted which allows DNR orders to be written, it may be inferred that the population of physicians of interest will likely write such orders when necessary. Irresponsible decision making with regard to DNR orders, may be helped by a written DNR policy. Several physicians gave hand written responses which in effect meant that nothing would help an irresponsible physician make a DNR decision.

Results of the survey lead to the conclusion that a DNR policy should require the explanation of the relevant facts to the competent patient and to the appropriate relative or guardian in the case of the incompetent patient. The desires of the competent patient regarding the measures used to prolong his life should not be overruled. A provision may be made for a physician or nurse to temporarily remove the DNR order when the patient's condition changes. This issue would appear to require more study before a definite policy is established.

Patients should receive all the physical and mental comfort which can be reasonably provided. Numerous hand written comments were offered about this issue, however, none of them mentioned the use of a hospice environment to provide physical and mental comfort to a dying patient. It was not the purpose of this study to get into the issue of hospices and no attempt was made to lead the respondents to reach such a conclusion.

In dealing with the incompetent patient, a DNR policy may include a priority listing of the appropriate family members who could make decisions for the patient. Since the priority of relatives who can make decisions for incompetent patients is not uniform from state to state in the law, it is doubtful that a priority listing could be included in an HSC level policy.

An interval should be specified for reassessment of DNR orders. The criteria for reassessment should be the same for the competent and incompetent patient.

Physicians in the population of interest may believe that a request, at anytime, from the appropriate family member for removal of DNR should be honored, therefore, it cannot be recommended that such a comment be put in an HSC wide policy.

A Health Services Command DNR policy should require that the DNR decision not be made by the physician alone. It could not be concluded from the survey that physicians in the population of interest feel that the other person involved in the decision should be another physician. The hand written comments received in this area recommended the physician and patient or family be the ones to make the DNR decision. It may be that a committee made up of members of the patients care team should make the DNR decision, however, this approach seemed to have weak support among the sampled physicians. It may also be that physicians feel that a committee approach to DNR decisions would be too time consuming and cumbersome. Some vehement comments were written on several responses to the questions about committees such as "goddamnit no committees" and "committees never decided anything". Based on the results of the survey, it cannot be recommended that a committee be used to make DNR decisions.

While it was not the primary purpose of the survey to solicit physician opinion about the handling of children with severe birth defects, it was determined that a comment about these children should be included in a DNR policy.

It cannot be inferred from the results of the survey that a DNR policy direct patients be provided with a written informational paper which describes the use of DNR orders.

It was felt that if a significant number of physicians felt that their medical education had not adequately prepared them to advise patients and families about DNR orders, that a effort be made to correct this situation

through a continuing education program. Physicians in the population of interest may feel their education was adequate in this area. Further research in this area would be required before any definite conclusions could be reached.

Recommendations

Based on the results of this research it is recommended that a Health Services Command policy be promulgated which allows physicians to write "Do Not Resuscitate" orders into a terminally patient's chart. The general outline of the policy is presented in figure 1. Others who may wish to analyze the data derived from research may wish to use a less stringent criteria for significance than was used in this study. If that be the case, it is suspected that more items might be added to the suggested policy outline.

A copy of the United States Navy's "Guidelines for Orders not to Resuscitate" is included at Appendix C. This policy is dated 9 February 1983 and was furnished after this research project was begun. Many of the points in the suggested DNR policy outline are included in the Navy's version. It should be noted that the Navy did implement a committee system which was not supported by a significant number of physicians in this survey.

It is doubtful that a perfect policy, which will please everyone, can be written with regard to "Do Not Resuscitate" orders. Results of the survey do allow a strong recommendation be put forth allowing the writing of DNR orders in the charts of terminally ill patients.

- I. DNR decisions for the terminally ill patients who are considered to be competent:
 - A. Discuss the relevant facts in the case to determine the direction in which treatment should proceed.
 - B. If the patient requests that all measures necessary be used to prolong his life, he should not be overruled.
 - C. Intervals should be specified for reassessment of DNR orders.
 - D. While the DNR order is in effect, all reasonable measures should be provided for the physical and mental comfort of the patient.
- III. DNR decisions for terminally ill patients who are considered to be incompetent:
 - A. Discuss the facts in the case with the appropriate family member or guardian.
 - B. Use the same reassessment criteria for evaluating a DNR order for an incompetent patient as for a competent patient.
- II. Administrative mechanisms to facilitate making the DNR decision.
 - A. Describe who besides the attending physician will be involved in making DNR decisions.
 - B. Address children born with severe defects.
 - C. Write the DNR order into patient's chart.

Figure 1. The General outline of the recommended Health Services Command "Do Not Resuscitate" Policy.

APPENDIX A

D R A F T

49

HSUB-XO

SUBJECT: Preferences for a "Do Not Resuscitate" Policy for Terminally Ill Patients

↓name↓
↓address↓
↓city↓

1. There is not at present a definitive policy in the military medical community which permits active duty physicians to write, "Do Not Resuscitate (DNR)" or "No Code" orders in the chart of a terminally ill patient who is near death. The medico-legal issue of written DNR orders and a supporting policy to guide physicians in their decision-making process has been selected for study by the United States Army - Baylor University Program in Health Care Administration Administrative Resident at Fort Stewart, Georgia. Preliminary inquiries have revealed that the subject of DNR orders is of interest to many physicians and a definitive policy on this issue would support the entire military health care community.

2. You have been randomly selected to receive a questionnaire designed to gather the opinion of military physicians who manage the care of terminally ill patients concerning the use of heroic resuscitative procedures. Heroic resuscitative procedures are defined for purposes of this questionnaire as the use of all mechanical and pharmacological means available to resuscitate and maintain a terminally ill or comatose/moribund patient.

3. The questionnaire is attached as an inclosure to this letter, along with a pre-addressed envelope for its return, and a pre-addressed post card which acknowledges return of the survey. There is no need to sign the questionnaire unless you wish to do so. If you desire a copy of the results of the survey, place a check mark in the space provided on the post card. Your cooperation in completing and returning the survey as soon as possible will be sincerely appreciated.

1 Incl
as

JOHN N. MCNAIR
MAJ, MSC
Administrative Resident

"DO NOT RESUSCITATE" POLICY FOR TERMINALLY ILL PATIENTS QUESTIONNAIRE

DEMOGRAPHIC INFORMATION:

1. (a) What is the name of the medical school from which you obtained your M.D./D.O. Degree?

(b) In what year did you obtain your M.D./D.O. degree?

2. Your current practice is as a:

___ Resident

___ Full time physician on hospital staff

___ Administrator/Commander

3. Marital status:

___ Single

___ Married

___ Divorced or Separated

___ Widowed

4. Sex:

___ Male

___ Female

5. Race:

___ Black

___ White

___ Other

6. Your age (nearest year):

7. In what specialty do you currently practice?

- | | |
|--|--|
| <input type="checkbox"/> Anesthesiology | <input type="checkbox"/> Obstetrics/Gynecology |
| <input type="checkbox"/> Cardiology | <input type="checkbox"/> Oncology |
| <input type="checkbox"/> Family Practice | <input type="checkbox"/> Orthopedic Surgery |
| <input type="checkbox"/> Gastroenterology | <input type="checkbox"/> Pediatrics |
| <input type="checkbox"/> General Surgery | <input type="checkbox"/> Pediatric Cardiology |
| <input type="checkbox"/> Internal Medicine | <input type="checkbox"/> Thoracic Surgery |
| <input type="checkbox"/> Neuro Surgery | <input type="checkbox"/> Urology |
| | <input type="checkbox"/> Other |

8. Approximately how many terminally ill patients have provided the primary medical management?

_____.

9. Do you favor a Health Services Command written command policy permitting "No Code" or "Do Not Resuscitate" orders to be written in the chart?

yes no

10. Would you consider the writing of a "Do Not Resuscitate" order in a terminal patients records good medical practice with or without legal precedent?

yes no

11. Have you ever given verbal orders to the nursing staff not to resuscitate a patient?

yes no

12. Have you ever written in the chart an order which in effect means "Do Not Resuscitate" or "No Code?"

yes no

13. Do you believe that a "Do Not Resuscitate" policy would have a positive effect on physician-nurse relationships?

yes no

14. If Health Services Command had a policy authorizing the charting of "Do Not Resuscitate" orders would you be willing to write such an order?

yes no

15. Do you believe a clear "Do Not Resuscitate" policy would reduce the chance of irresponsible decision-making as pertains to withholding heroic life saving measures?

yes no

IN THE CASE OF THE TERMINALLY ILL PATIENT WHO IS CONSIDERED COMPETENT:

16. Do you believe the relevant facts should be discussed with the patient to determine the direction in which treatment should proceed?

yes no

17. If the patient requests that all measures necessary be used to prolong his life, do you believe his wishes should be honored?

yes no

18. If the patient elects to allow you to write a "Do Not Resuscitate" order, do you believe an interval should be specified for reassessment of the order?

yes no

19. In the circumstances where the patient's condition changes should a nurse or another physician be allowed to temporarily remove the "Do Not Resuscitate" order without the advice of the primary physician?

yes no

20. While the "Do Not Resuscitate" order is in effect should all reasonable measures be provided for the physical and mental comfort of the patient?

yes no

IF THE PATIENT IS UNCONSCIOUS OR INCOMPETENT:

21. Should the relevant facts in the case be discussed with the appropriate family member or guardian?

___ yes ___ no

22. Should a "Do Not Resuscitate" policy specify the appropriate family members in priority who can make decisions for the incompetent patient?

___ yes ___ no

23. Should the reassessment criteria of a "Do Not Resuscitate" order for the incompetent patient be the same as for a competent patient?

___ yes ___ no

24. Should a request, at any time, from an appropriate family member or guardian to remove the DNR order, be implemented without question?

___ yes ___ no

IN MAKING A "DO NOT RESUSCITATE" DECISION:

25. Do you believe that the decision not to resuscitate a patient who is terminally ill should be solely the physicians?

___ yes ___ no

26. Should consultation with at least one other physician be required before a "Do Not Resuscitate" order is written?

___ yes ___ no

27. If a committee were used to decide on a "Do Not Resuscitate" order, should all the members of the patient's care team be involved?

___ yes ___ no

28. Do you feel that a committee approach to a "Do Not Resuscitate" decision would be too cumbersome and time consuming?

___ yes ___ no

29. Do you believe a "Do Not Resuscitate" policy should address children born with severe birth defects?

___ yes ___ no

30. Would you be highly selective in giving your patients information about DNR orders?

___ yes ___ no

31. Would you provide the patients with an informational paper in regard to the use of "Do Not Resuscitate" orders?

___ yes ___ no

32. Do you feel your medical education adequately prepared you to advise patients and families concerning "Do Not Resuscitate" orders?

___ yes ___ no

APPENDIX B

TABLE 2
MEDICAL SCHOOLS REPRESENTED BY RESPONDENTS TO THE DMR QUESTIONNAIRE

SCHOOL	NUMBER	SCHOOL	NUMBER	SCHOOL	NUMBER
No school listed	12	Loma Linda U.	2	State U. of NY	3
Alabama MC	10	Loyda U. Chicago	4	SUNY-Syracuse	1
Baylor	6	Loyda-Stritch	4	SUNY-Brooklyn	4
Boston U.	5	LSU	3	SUNY-Upstate	5
Bowman-Gray	3	Marquette	2	Tenn Tech	2
Brown U.	3	Maryland	2	Texas COSM	1
Cape-Mesquit Reserve	3	U. of Pennsylvania	8	Texas Tech	1
Chicago COSM	3	U. of South Carolina	1	Tulane	2
Cincinnati	4	U. of Virginia	3	U. of Arkansas	1
Columbia U.	5	U. of Georgia	1	U. of C-San Diego	1
Cornell	4	McGill	1	U. of California	1
COSM	1	McHenry	1	U. of Chicago	1
COSM Des Moines	5	Michigan State	5	U. of Cincinnati	1
Creighton	5	Mississippi	1	U. of Colorado	1
Duke	1	Missouri-UW	1	U. of Connecticut	1
VA-Norfolk	1	Missouri State	1	U. of Florida	1
Emory	3	NE COSM	1	U. of Hawaii	1
Embry	4	New York MC	1	U. of Illinois	1
Foreign Medical Sch. Grad.	37	NYU Sch of Medicine	2	U. of Iowa	1
George Washington	6	Northwestern	6	U. of Kansas	1
Georgetown	3	Ohio State U.	8	U. of Kentucky	1
Harvard	1	Oklahoma U.	6	U. of Louisville	1
Howard	2	Penn State	3		

TABLE 2 (Continued)

SCHOOL	NUMBER	SCHOOL	NUMBER	SCHOOL	NUMBER
Indiana	7	Philadelphia COSM	4	U. of Michigan	4
Jefferson MC	4	Southwestern	1	U. of Minnesota	3
Johns Hopkins	4	St. Louis U.	1	U. of Missouri	3
Kansas City COSM	6	U. of N.-Brooklyn	1	U. of Nebraska	4
Kirkville COSM	6	Stanford	1	U. of New Mexico	2
U. of Pennsylvania	3	Stanly MC	1	U. of Oregon	7
U. of Pittsburgh	3	WVSON	2		
U. of Puerto Rico	0	West Virginia MC	2		
U. of Rochester	1	Yale	2		
U. of Alabama	1				
U. of Florida	1				
U. of South Dakota	1				
U. of Tennessee	4				
U. of Texas-	4				
Galveston					
U. of Texas-Dallas	2				
U. of Texas-Houston	1				
U. of Utah	1				
U. of Virginia	1				
U. of Vermont	1				
U. of Washington	1				
U. of C.-Davis	1				
UCLA	1				
U. of North Carolina	1				
Union U.-Albany	1				
USC	1				
UNM	1				
UNM-Dallas	1				
UNM	1				
U. of Wisconsin	1				
Vanderbilt	1				
Wake Forest	1				
Washington U.	1				
Wayne State	1				
Womens U. of Penn	1				
Wright State	1				

TABLE 14
CHI SQUARE TEST FOR INDEPENDENCE OF SPECIALTY

	Anesthesiology	Cardiology	Family Practice	Gastro-Enterology	General Surgery	Internal Medicine	Obstetrics/Gyn	Oncology	Orthopedic Surgery	Pediatrics	Thoracic	Urology	Other	Total	Calculated K ²
9	Yes 12(2.08)	21(2.88)	10(6.71)	7(8.71)	11(7.49)	7(16.28)	3(2.48)	19(2.85)	3(2.07)	5(15.92)	11(11.66)	14(12.07)	3(12.07)	47	8.80
	No 18	15(5.51)	18(12.90)	11(9.76)	11(16.16)	19(19.98)	19(15.51)	20(15.51)	3(12.07)	5(11.83)	12(12.67)	13(12.58)	3(12.67)	47	9.23
10	Yes 16(12.48)	20(15.33)	11(8.37)	11(8.37)	11(8.37)	11(11.33)	11(8.37)	11(8.37)	11(8.37)	11(11.33)	11(11.33)	11(11.33)	11(11.33)	113	17.80
	No 18	19(12.48)	21(14.67)	11(7.52)	11(7.52)	11(11.33)	11(8.37)	11(8.37)	11(8.37)	11(11.33)	11(11.33)	11(11.33)	11(11.33)	113	13.25
11	Yes 19(12.48)	21(15.33)	11(8.37)	11(8.37)	11(8.37)	11(11.33)	11(8.37)	11(8.37)	11(8.37)	11(11.33)	11(11.33)	11(11.33)	11(11.33)	113	9.33
	No 18	19(12.48)	21(14.67)	11(7.52)	11(7.52)	11(11.33)	11(8.37)	11(8.37)	11(8.37)	11(11.33)	11(11.33)	11(11.33)	11(11.33)	113	10.62
12	Yes 19(12.48)	21(15.33)	11(8.37)	11(8.37)	11(8.37)	11(11.33)	11(8.37)	11(8.37)	11(8.37)	11(11.33)	11(11.33)	11(11.33)	11(11.33)	113	19.06
	No 18	19(12.48)	21(14.67)	11(7.52)	11(7.52)	11(11.33)	11(8.37)	11(8.37)	11(8.37)	11(11.33)	11(11.33)	11(11.33)	11(11.33)	113	

K² critical value with 12 degrees of freedom = 21.026 at α = .05

TABLE 15
CHI SQUARE TEST FOR INDEPENDENCE OF AGE

Question/Answers	21-30	31-35	36-40	41-45	46-50	51-55	56	Total	Calculated χ^2	Independent P Value
9 Yes	75(70)	177(176.75)	105(106.75)	39(38.5)	24(25.38)	12(14.88)	9(8.75)	441	8.26	
No	5(10)	25(26.25)	122(18.25)	44(5.5)	29(3.63)	17(2.12)	10(1.25)	504		
Total	80	202	122	44	29	17	10	441		
10 Yes	99(68.9)	176(167.63)	101(104.25)	36(38.36)	23(24.19)	11(14.17)	9(7.5)	422	11.33	
No	79(13.11)	25(33.37)	24(20.75)	10(7.64)	9(4.81)	6(2.83)	9(1.49)	84		
Total	79	201	125	46	29	17	9	506		
11 Yes	64(61.98)	165(158.05)	96(97.62)	40(37.19)	18(23.24)	9(13.17)	7(7.75)	399	14.40	.05 < p < .025
No	16(18.02)	35(45.95)	30(26.38)	8(10.81)	12(6.76)	8(3.83)	10(2.25)	116		
Total	80	204	126	48	30	17	10	515		
12 Yes	45(61.98)	130(158.05)	77(97.62)	25(36.41)	11(23.24)	9(13.17)	4(7.75)	302	118.2	No
No	34(18.02)	74(45.95)	49(28.38)	22(10.59)	19(6.75)	8(13.83)	6(2.25)	212		
Total	80	204	126	47	30	17	10	514		
13 Yes	73(67.06)	171(168.51)	98(104.03)	37(36.97)	23(24.93)	13(13.76)	9(7.74)	423	7.93	
No	78(16.94)	25(27.49)	23(16.97)	43(6.03)	29(4.07)	16(2.24)	9(1.26)	69		
Total	78	196	121	43	29	16	9	492		
14 Yes	77(74.99)	193(190.29)	117(116.23)	44(46)	29(28.12)	19(15.94)	9(9.37)	479	7.75	
No	3(5.01)	19(12.71)	124(7.07)	6(2.94)	4(1.88)	1(1.06)	10(1.626)	32		
Total	80	203	124	47	30	17	10	611		
15 Yes	71(61.14)	155(153.63)	87(95.63)	35(43.11)	22(36.06)	12(11.76)	9(7.95)	388	42.53	No
No	78(16.85)	41(42.37)	35(26.37)	11(2.88)	29(9.94)	15(3.24)	9(1.95)	107		
Total	78	196	122	46	29	15	9	495		

59

Critical value χ^2 at $\alpha = .05$ and 6 degrees of freedom = 12.592

TABLE 16
RESULTS AND ANALYSIS OF THE OPINION OF ALL PHYSICIANS WHO RESPONDED TO THE
DNR QUESTIONNAIRE

QUESTION NUMBER	YES	NO	NO RESPONSE	PERCENT YES	CALCULATED Z SCORE n=517	SIGNIFICANT	P VALUE
16.	507	4	6	98.1	12.1	Yes	<.001
17.	476	26	15	92.1	8.96	Yes	<.001
18.	408	96	13	78.9	2.06	Yes	.0197
19.	337	159	21	65.2	-5.15	No	>.999
20.	513	0	4	99.2	12.72	Yes	<.001
21.	511	2	4	98.8	12.61	Yes	<.001
22.	395	112	10	76.4	.735	No	.1996
23.	411	87	19	79.5	2.36	Yes	.0091
24.	295	203	19	57.1	-9.42	No	>.999
25.	76	433	8	*83.8	4.60	Yes	<.001
26.	343	162	12	66.3	-4.55	No	>.999
27.	244	245	28	47.2	-14.60	No	>.999
28.	380	122	15	73.5	-.787	No	.784
29.	420	74	23	81.2	3.28	Yes	<.001
30	338	132	47	65.4	-5.05	No	>.999
31.	265	225	28	51.1	-12.57	No	>.999
32.	373	134	10	72.1	-1.50	No	.9932

* z = .05
z critical = 1.645

TABLE 17
 RESULTS AND ANALYSIS OF THE OPINION OF PHYSICIANS WHO FAVORED A HEALTH
 COMMAND DNR POLICY

QUESTION NUMBER	YES	NO	NO RESPONSE	PERCENT YES	CALCULATED Z SCORE n=440	SIGNIFICANT	P VALUE
16.	432	4	4	98.2	11.23	Yes	<.001
17.	407	21	12	92.5	8.48	Yes	<.001
18.	353	79	8	80.2	2.53	Yes	.006
19.	291	134	15	66.1	-4.29	No	>.999
20.	440	0	0	100.0	12.11	Yes	<.001
21.	435	2	3	98.9	11.56	Yes	<.001
22.	340	94	6	77.3	1.10	No	.134
23.	356	73	11	80.9	2.86	Yes	.002
24.	251	74	15	57.0	-8.69	No	>.999
25.	60	*375	5	85.2	4.95	Yes	<.001
26.	290	142	8	65.9	-4.40	No	>.999
27.	212	209	19	48.2	-12.99	No	>.999
28.	328	102	10	74.5	-.22	No	.5871
29.	361	63	16	82.0	3.41	Yes	<.001
30.	282	120	38	64.1	-5.28	No	>.999
31.	230	188	22	52.2	-11.00	No	>.999
32.	323	114	3	73.4	-.77	No	.779

$\alpha = .05$
 $Z_{critical} = 1.645$

TABLE 18
RESULTS AND ANALYSIS OF THE OPINION OF PHYSICIANS WHO DID NOT FAVOR A
HEALTH SERVICES COMMAND DNR POLICY

QUESTION NUMBER	YES	NO	NO RESPONSE	PERCENT YES	CALCULATED Z SCORE n=64	SIGNIFICANT	P VALUE
16.	63	0	1	98.4	4.33	Yes	<.001
17.	58	4	2	90.6	2.89	Yes	.0019
18.	56	16	4	75	-1.87	No	.8079
20.	61	0	3	95.3	3.75	Yes	<.001
21.	64	0	0	100.0	4.62	Yes	<.001
22.	46	15	3	71.9	-1.58	No	.719
23.	44	13		68.8	-1.15	No	.8749
24.	36	25		56.3	-3.46	No	>.999
25.	12	50	2	*78.1	.58	No	.281
26.	42	19	3	65.6	-1.73	No	.9582
27.	28	29	7	43.8	-5.77	No	>.999
28.	44	17	3	68.8	-1.15	No	.8749
29.	50	10	4	78.1	.58	No	.281
30.	47	11	6	73.4	-.29	No	.6141
31.	29	31	4	45.3	-5.48	No	>.999
32.	41	18	5	64.1	-2.02	No	.9783

* $\alpha = .05$
Z Critical = 1.645

APPENDIX C



DEPARTMENT OF THE NAVY
NAVAL HOSPITAL
NATIONAL NAVAL MEDICAL CENTER
BETHESDA, MARYLAND 20814

IN REPLY REFER
NHBETHINST 6320
NHBETH:83:ADS:
9 February 19

note original
SPC 11/1/83

NHBETH INSTRUCTION 6320.37

From: Commanding Officer

Subj: Guidelines for orders not to resuscitate

1. Purpose. To establish guidelines for writing orders not to resuscitate ("no code" orders).
2. Background. The routine application of cardiopulmonary resuscitation and Advanced Cardiac Life Support has given rise to serious questions regarding the appropriateness of resuscitating every patient who suffers an arrest. Confusion as to criteria for decisions not to resuscitate, identity of decision makers, and a proper decision making process has further obscured an already difficult problem. This instruction is intended to simplify the problem by establishing a clearly delineated decision making process, identifying the appropriate decision makers and providing both criteria for making such decisions and a system of review.
3. Policy. The overriding policy of this hospital is to maintain life and health, and the autonomy of both patients and medical department personnel.
4. Procedures for Writing Orders Not to Resuscitate. The following elements must be contained in every instance of writing orders not to resuscitate (DNR orders). (Terms are defined in paragraph 8.)
 - a. Only credentialed physicians may write orders not to resuscitate.
 - b. Orders must be clearly written, signed, dated and immediately shown to the ward or unit charge nurse.
 - c. The order not to resuscitate must be accompanied by a progress note describing the application of the decision making process. (See Tables 2 and 3.) The description will include:
 - 1) A statement indicating: condition (reversability/irreversability), physical status (reparability/irreparability), mental status (competent/incompetent/diminished competence), and prognosis (death imminent/non-imminent).
 - 2) Patient and family involvement including their attitudes and responses.
 - 3) Optimal care treatment plan.

d. The physician's discussion with the patient or family shall be witnessed by a registered professional nurse, or social worker, who will countersign the doctor's progress note.

e. DNR orders must be reviewed daily by the ward medical officer.

f. A staff physician must countersign all DNR orders and progress notes within twelve hours of their writing.

not internally consistent with 4a
g. The Quality Assurance/Risk Management officer must be notified of the DNR order by the physician writing the order within twelve hours of writing the order. The QA/RM officer will then notify the Chairman of the Medical Ethics Committee of the order.

5. Questions or Disagreement. The patient, any member of the family or of the health care provider team who questions or disagrees with the writing of the DNR order, or the absence of a DNR order, should express that disagreement in writing to the medical ethics committee.

6. Medical Ethics Committee. The committee will act as a decision making and review committee on matters relating to DNR orders, as well as other matters at the direction of the commanding officer.

a. Composition. The committee will be composed of the following seven members:

- One Medical Officer
- One Chaplain Corps Officer
- One Judge Advocate General Corps Officer
- One Medical Service Corps Officer (administrative)
- One Nurse Corps Officer
- One psychiatrist or psychologist
- One senior member of the Hospital Corps Staff

b. Action and Decision.

1) The committee will review monthly all DNR orders. It will act immediately, however, in those cases where immediate action is warranted or requested.

7. Discussion.

a. Paramount Role of the Patient. Underlying guidance on DNR orders is the fundamental principle that the patient's desires play the dominant role in the decision process; however, patients may not be competent at the time the question of resuscitation arises. There are two dimensions to competence: factual and legal. The dimensions can be classified on the following two by two matrix:

TABLE 1
Classification of Legal and Factual Competence

	Factual	Legal
Competent		
Incompetent		

b. Legally and Factually Competent Patient. In general, when the competent patient requests a DNR order, the request will be honored as outlined by Table 2 regardless of the expected benefits of resuscitation.

TABLE 2

Resuscitation Decisions for Competent Patients
as a function of the provider's assessment
of benefit and of the patient's preference

PROVIDER'S ASSESSMENT	PATIENT'S PREFERENCE*		
	Competent preference favoring resuscitation	No competent preference expressed	Competent preference opposing resuscitation
Resuscitation would benefit patient	Resuscitate	Resuscitate	Reexamine decision process closely, then do not resuscitate
Unclear whether resuscitation would benefit patient	Resuscitate	Resuscitate	Do not resuscitate
Resuscitation would <u>not</u> benefit patient	Reexamine decision process closely, then resuscitate	Do not resuscitate	Do not resuscitate

i.e. must place a pt with esophageal carcinoma on DNR

* For purposes of this table, prior (written or oral) directives of a person while competent, if not changed by more recent statements or actions of that person, are considered to be "competent" preferences.

The following cases will be given immediate attention by the committee:

1) Third Party Interests. If reasons exist not to honor the patient's request for a DNR order (e.g., the patient is pregnant, is a sole or primary provider, and so forth), the case shall be referred to the committee. If the committee agrees there is a third party interest but the patient persists in his decision, the case will be referred to the courts. If the committee concludes that there is no third party interest, then the committee will consult with the individual asserting the third party interest. If this

person then agrees with the committee, the patient's wishes are followed; if not, the case may be referred to the courts.

2) Disagreement with Patient. In the event of disagreement with the patient by any health care provider or family member, the case will be referred to the committee. If the committee concurs with the individual in disagreement with the patient, the committee will recommend that a coercive offer (i.e., that the patient be transferred to another facility) be made or will refer the case to the courts. If the committee agrees with the patient, it will meet with the disagreeing person. If the health care provider does not agree, he shall comply with the committee's decision or be removed from the case. If the family continues in disagreement, it may refer the case to the courts.

3) Military Personnel. Governmental claims of a right to require medical care for the individual member obtain only when it can reasonably be expected that the member can be returned to duty as an active and contributing member of the armed forces. Governmental rights should not, therefore, be considered in the case of the terminally ill patient or in the patient in which treatment would constitute undue suffering. In such cases, the patient is to be treated as a legally and factually competent patient.

c. Legally Incompetent, Factually Competent Patient.

1) Minors. The decision not to resuscitate a minor must be made by the parent or a person standing in place of the parent. In making the decision, the parent or substitute must act in the best interest of the minor. In addition, in the case of a mature minor, the minor's assent should be obtained.

d. Incompetent Patient. Subsumed under the category of the incompetent patient is the patient with diminished competence. In all decisions the underlying principle is to attempt to determine the decision the patient would have made were he fully competent and informed. This is especially true in the case of the patient whose capacity is diminished as a consequence of pain, therapeutic regimen, or other factors associated with the illness.

1) Table 3 summarizes the decision alternatives first as a function of the provider's assessment of benefit vis à vis the family's views and second as a function of the provider's recommendation and the family's views.

TABLE 3

A. Summary of Resuscitation Decisions for Incompetent Patients, as a function of the provider's assessment of benefit and of the family's views

Provider's assessment of benefit to patient	FAMILY'S POSITION*		
	Incompetent Patient without Family	Family Agrees with Provider's Assessment	Family Disagrees with Provider's Assessment
Resuscitation would benefit patient	Resuscitate	Resuscitate	Review +
Unclear whether resuscitation would benefit patient	Resuscitate	Resuscitate	Family decides <i>family is to decide</i> I.e.
Resuscitation would not benefit patient	Reexamine closely, then do not resuscitate →	Do not resuscitate +	Resuscitate unless guardianship is transferred

B. Summary of Resuscitation Decisions for Incompetent Patients, as a function of the provider's recommendation and the family's views

Provider's Recommendation Course	FAMILY'S POSITION*	
	Family Agrees with Provider	Family Disagrees with Provider Because of Effects on Parties other than Patient
Should Resuscitate	Resuscitate	Review +
Should NOT Resuscitate	Do not resuscitate →	Review +

- * The family is assumed to be in agreement and to speak with one voice. Complications that develop when this is not the case should be referred to the medical ethics committee for review and disposition.
- Review cases call for immediate review and recommendation of the medical ethics committee.
- In cases of diminished competence decisions should always lean in favor of resuscitation. In the cases indicated, even though the provider and family agree that orders not to resuscitate would be most appropriate, but the patient of diminished competence expresses the desire to be resuscitated, then the final decision should be favor of resuscitation.

2) All cases involving incompetence or diminished competence will be routinely reviewed by the committee. Before the DNR order is written, however, the case must be reviewed at least by a legal officer and psychologist or psychiatrist to establish competence. If the order is one that on Table 3 calls for review or reexamination, then the case must be reviewed by the committee before the order is written.

3) When the committee concurs with the physician, members of the committee may assist the physician in clarifying the provider's assessment for the family. If the family remains unpersuaded, the provider may make a coercive offer or refer the matter to the courts.

4) When the committee concurs with the family, it shall confer with the physician. If the disagreement remains, the physician shall comply with the committee's decision or be removed from the case.

8. Definitions. In general, the definitions contained herein are either consistent with or derived from the President's Commission for the Study of Ethical Problems in Medicine, and where applicable, local laws and military regulations.

a. Assent. The passive acceptance of a decision made by others.

b. Autonomy. The right of self determination, i.e., the right of competent persons to form, revise and pursue a plan of life. In matters of patient care and orders not to resuscitate, it means that the competent patient's own values shall be decisive. It also means that health care providers shall not be required to act in a manner contrary to their own values or professional standards.

c. Competence. The ability to make an informed choice. In the case of orders not to resuscitate, it means that the patient understands the relevant risks and alternatives with their attendant consequences. The decision should reflect deliberate choice.

1) Legal Incompetence. That situation in which an individual is incompetent by operation of law, e.g., a minor or a person previously declared incompetent by judicial decree. Under Maryland state law, a minor who is married or who is a parent is legally competent.

2) Factual Incompetence. Those situations in which a patient is comatose, unconscious, suffering insane delusions or is otherwise unable to manage his or her personal affairs due to mental disability or disease.

d. Consent. Active participation in and agreement with a decision.

e. Death Imminent. That condition in which in the ordinary course of events, death will probably occur within two weeks. Note that while a death imminent prognosis is a contributing factor for an order not to resuscitate, its absence does not create a prohibition.

f. Diminished Competence. This condition exists when a patient cannot make decisions that promote his well being in accordance with his own previously expressed values and preferences. Diminished competence is often seen as a consequence of pain, therapeutic regimen, or other factor associated with the patient's illness.

9 February 1983

g. Family. Those persons sharing a consanguineous relationship (blood) with the patient. In order of consanguinity, this includes the patient's spouse, children, parents and siblings.

h. Informed Consent. A principle of law embodied within the patient's autonomy or right of self determination. It requires that the patient must be informed of all proposed medical procedures, the material risks of those procedures, alternative courses of action and the material risks attendant to the alternatives.

i. Mature Minor. Those above the age of 14 will generally be considered mature minors. Those under the age of fourteen may be so considered at the discretion of the committee.

j. Optimal Care. Care which assures the comfort, dignity, and physical maintenance of the patient regardless of the existence of orders not to resuscitate.

k. Reparability. The extent to which the illness can be cured, corrected, or otherwise stemmed within existing knowledge and technology.

l. Reversability. The extent to which known therapeutic measures can effectively reverse the course of the illness.

m. Terminally ill. That condition in which there is no reasonable medical possibility that the patient will avoid death and return to a normal cognitive and sapient state.

9. Action. Chiefs of directorates are required to ensure that the provisions of this instruction are understood and carried out. It is also highly recommended that those providers having to deal with orders not to resuscitate become familiar with the bibliography on the subject in the E. R. Stitt Library.



J. J. QUINN

Dist: II

SELECTED BIBLIOGRAPHY

SELECTED BIBLIOGRAPHY

Books

- Aries, Phillipe. Western Attitudes Toward Death: From the Middle Ages to Present. Translated by Patricia M. Ranum. Baltimore: The Johns Hopkins University Press, 1974.
- Barnette, Henlee H. Exploring Medical Ethics. Macon, GA.: Mercer University Press, 1982.
- Baer, Louis S. Let the Patient Decide. Philadelphia: The Westminster Press, 1978.
- Browning, Mary H. and Lewis, Edith P. comps. The Dying Patient: A Nursing Perspective. New York: The American Journal of Nursing Company, 1972.
- Browning, Mary H. and Lewis, Edith P. comps. Nursing and the Cancer Patient. New York: The American Journal of Nursing Company, 1973.
- Bursztajn, Harold; Feinbloom, Richard I., Hamm, Robert M.; and Brodsky, Archie. Medical Choices Medical Changes. New York: DelaCorte Press, 1981.
- Crane, Diana. The Sanctity of Social Life: Physicians Treatment of Critically Ill Patients. New York: Russell Sage Foundation, 1975.
- Daniel, Wayne W. and Terrel, James C. Business Statistics. 2d ed. Boston: Houghton Mifflin Company, 1979.
- Earle, Ann M.; Argondiyzo, Nina T.; and Kutcher, Austin H., ed. The Nurse as a Caregiver for the Terminal Patient and His Family. New York: Columbia University Press, 1976.
- Healy, E.F. Medical Ethics. Chicago: Loyola University Press, 1956.
- Hiller, Marc D. Medical Ethic and the Law. Combridge, Mass.: Ballinger Publishing Company, 1981.
- Kübler-Ross, Elisabeth. On Death and Dying. New York: MacMillian Publishing Co. Inc., 1969.
- Laskey, Paul C. ed. Hospital Law Manual. Rockville, MD: Aspen Systems Corp, 1982.
- Russell, O. Ruth. Freedom to Die. New York: Human Sciences Press, 1977.
- Schoenberg, Bernard; Carr, Arthur C.; Peretz, David; and Kutscher, Austin H. Psychosocial Aspects of Terminal Care. New York: Columbia University Press, 1972.

Wilson, Jerry B. Death by Decision. Philadelphia: The Westminster Press, 1975.

Veatch, Robert M. Death, Dying and Biological Revolution. London: Yale University Press, 1976.

Veatch, Robert M. Case Studies in Medical Ethics. Cambridge, Mass: Harvard University Press, 1977.

Articles and Periodicals

Adler, Diane C. "No Code - The Unwritten Order," Heart and Lung 6 (February 1977): 213.

Alexander, Mary. "Resuscitation a Matter of Life and Death ... A Nurse's Viewpoint on Resuscitation in the Terminally Ill," Nursing Mirror 149 (December 1979): 26-7.

AMEDD Officer Listing MEDD-333 Part 6 Officer Specialty/Grade Listing prepared by the Military Personnel Center, Department of the Army, Washington, D.C., November 1982

Anger, Diane and Anger, Daniel W. "Dialysis Ambivalence: A Matter of Life and Death," American Journal of Nursing 76 (February 1977): 276-7.

Annas, George J., "Rights of the Terminally Ill Patient," Journal of Nursing Administration 4 (March/April 1974): 40-4.

Arena, F.P.; Perlin, M.; and Turnbull, A.D. "Initial Experience with a 'Code-No Code' Resuscitation System in Cancer Patients," Critical Care Medicine 8 (December 1980): 733-5.

Arnold, John D.; Zimmerman, Thomas F.; Martin, Daniel C. "Public Attitudes and the Diagnosis of Death." Journal of the American Medical Association 206 (25 November 1968): 1949-54.

Aronson, Gerold J. "Treatment of the Dying Person." In The Meaning of Death, pp. 251-8. Edited by Herman, Feifel. New York: McGraw-Hill Book Company, 1959.

Ayd, Frank J., Jr. "The Hopeless Case," The Journal of the American Medical Association 181 (September 29, 1962): 1099-1102.

"Barbara's Resuscitation Dilemma," RN 42 (May 1979): 105-11.

Baer, Louis S. "Cardiopulmonary Resuscitation After Age 65," American Journal of Cardiology 43 (May 1979): 1065.

Bayer, Mark J.; Bander, Joseph J.; and Orent, Sanders. "How much CPR is enough CPR," JACEP 7 (May 1978): 219-20.

- Beauchamp, Joyce M. "Euthanasia and the Nurse Practitioner," Nursing Forum 14 (January 1975): 56-73.
- Bonine, Gladys N. "Students Reactions to Childrens Deaths," American Journal of Nursing 67 (July 1967): 1439-40.
- Bosley, A. "Resuscitation of the Newborn," British Medical Journal 2 (6204) (15 December 1979): 1590.
- Brierly, J.B. and Adams, J.H. "Neocortical Death After Cardiac Arrest," Lancet 2 (1971): 560-5.
- Brown, Judith R. "No Written Order for No Code," Nursing 11 (December 1981): 94-5.
- Brown, Norman K.; Bulger, Roger J.; Laws, E. Harold; and Thompson, Donovan J. "The Preservation of Life" Journal of American Medical Association 211 (5 January 1970): 76-81.
- Butchart, Kay; Matthews, A.; Boyson, E.; and Martin, Adele. "In the Midst of Death," Nursing Times 75 (23 August 1979): 1429-33.
- Camus, Albert. "An Absurd Reasoning." In Ethical Issues in Death and Dying, pp. 324-35. Edited by Tom L. Beauchamp and Seymour Perlin. Englewood Cliffs, New Jersey, Prentice-Hall, Inc., 1978.
- Cantor, Norman L. "A Patients Decision to Decline Life - Saving Medical Treatment: Bodily Integrity versus the Preservation of Life," Rutgers Law Review 26 (Winter 1973): 228-64.
- Carey, Raymond G. "Living Until Death," Hospital Progress 55 (February 1974): 82-7.
- Childress, James F. "To Kill or Let Die." In Bioethics and Human Rights, pp. 128-31. Edited by Elsie L. Bandman and Bertram Bandman. Boston: Little Brown and Company, 1978.
- Cohen, Kenneth P. "Living with Death: Some Legal Considerations," Family Community Health 2 (November 1979): 1-16.
- Coskey, Richard L. "Cardiopulmonary Resuscitation: Impact on Hospital Mortality - A Ten Year Study," Western Journal of Medicine 129 (December 1978): 511-7.
- "CPR Policies: The Art of the Possible Optimum Care for Hopelessly Ill Patients," Supervisor Nurse 10 (August 1979): 16-8.
- Crane, Diana. "Physicians attitude Toward the Treatment of Critically Ill Patients," Radcliffe Quarterly 62 (March 1976): 18-21.

- Crutcher, James C. Letter on "No Code and Similar Orders." Veterans Administration, Department of Medicine and Surgery, Washington, DC., 20 November 1979.
- Curran, William J. "Setting the Medicolegal Issues Concerning Brain Death Statutes: Matters of Legal Ethics and Judicial Precedent," New England Journal of Medicine 299 (6 July 1978): 31-2.
- Curtin, L. L. "CPR Policies: The Art of the Possible. CPR Optimal Care vs Maximal Treatment," Supervisor Nurse 10 (August 1979): 16-8.
- Curtin, L. L. "The Prostitution of CPR," Supervisor Nurse 10 (April 1979): 7.
- Cushing, Maureen "Verbal No Code Orders," American Journal of Nursing 81 (January 1981): 1215-6.
- Debard, Mark L. "Cardiopulmonary Resuscitation: Analysis of Six Years Experience and Review of the Literature," Annals of Emergency Medicine 10 (August 1981): 408-16.
- Diamond, Eugene F. "The Deformed Child's Right to Life." In Death Dying and Euthanasia, pp. 127-38. Edited by Dennis J. Horan and David Mall. Frederick, MD: University Publications of America, Inc., 1977.
- Duff, Raymond S. and Campbell, A.G.M. "Moral and Ethical Dilemma's in the Special-Care Nursery." In Death, Dying and Euthanasia, pp. 92-104. Edited by Dennis J. Horan and David Mall. Frederick, MD: University Publications of America, Inc., 1977.
- Elkinton, J. Russell. "When Do We Let the Patient Die," Annals of Internal Medicine 68 (March 1968): 695-700.
- Evans, Kenneth G. "No Resuscitation Orders - An Emerging Consensus," Canadian Medical Association Journal 125 (15 October 1981): 894-6.
- Fletcher, Joseph. "Ethics and Euthanasia," American Journal of Nursing 73 (April 1973): 670-5.
- Fusgen, I. and Summa, J.D., "How Much Sense is There in an Attempt to Resuscitate an Aged Person?" Gerontology 24 (January 1978): 37-45.
- Gargaro, William J. "Cancer Nurses and 'No Code' Orders," Cancer Nursing 2 (January 1979): 62-3.
- Glaser, Barney G. and Strauss, Anselin L. "Initial Definitions of Dying Trajectory." In Death: Current Perspective, pp. 83-94. Edited by Edwin S. Shneidman. Palo Alto, California: Mayfield Publishing Company, 1976.

- Goldenring J. "Code or No Code Decision," New England Journal of Medicine 300 (3 May 1979): 1059
- Gorer, Geoffrey. "The Pornography of Death." In Death: Current Perspectives, pp. 70-80. Edited by Edwin S. Shneidman. Palo Alto, California: Mayfield Publishing Company, 1976.
- Grant, J. Gary. "Code or No Code Decisions," New England Journal of Medicine 300 (4 May 1979): 1059.
- Greenlaw, Jane. "Orders Not To Resuscitate: Dilemma for Acute Care as Well as Long Term Care Facilities," Law Medicine and Health Care 10 (February 1982): 29-31.
- Griffin, Jerry J. "Family Decision: A Crucial Factor in Terminating Life," American Journal of Nursing 75 (May 1975): 794-6.
- Hegland, Kenney F. "Unauthorized Rendition of Lifesaving Medical Treatment." In Ethical Issues in Death and Dying, pp. 194-203. Edited by Tom L. Beauchamp and Seymour Perlin. Englewood Cliffs, New Jersey: Prentice-Hall, Inc. 1978.
- Hershy, Nathan. "On the Question of Prolonging Life," American Journal of Nursing, 71 (March 1971): 521-2.
- Hiscoe, Susan. "The Awesome Decision," American Journal of Nursing 73 (February 1973): 291-3.
- Hopkins, Clark. "The Right to Die with Dignity." In The Dying Patient: A Supportive Approach, edited by Rita E. Caughill. pp. 73-94. Boston: Little, Brown and Company, 1976.
- Horan, Dennis J. "Euthanasia as a Form of Medical Management." In Death, Dying and Euthanasia, pp. 196-221. Edited by Dennis J. Horan and David Mall. Frederick, Maryland: University Publications of America, 1977.
- Hutman, Barbara R. "No Code? Slow Code? Show Code?," American Journal of Nursing 82 (January 1982): 133+
- Josephson, Gordon W. "The Cardiopulmonary Resuscitation Record," Critical Care Medicine 8 (November 1980): 675-6.
- Kasper, August M. "The Doctor and Death." In The Meaning of Death, pp. 259-70. Edited by Hernian Feifel. New York: McGraw-Hill Book Company, 1959.
- Kübler-Ross, Elisabeth. "Dying with Dignity," The Canadian Nurse 67 (October 1971): 31-5.
- Kuhn, Margaret E. "Death and Dying - The Right to Live - The Right to Die." pp. 184-189. In ANA Clinical Sessions: American Nurse's Association 1974 San Francisco. New York: Appleton-Century-Crofts, 1974.

- Lampton, Lawrence M. and Winship, Daniel H. "The No Code Blue Issue: Missouri is Not Massachusetts," Missouri Medicine 76 (May 1979): 259-61.
- Lunt, Barry and Hillier, Richard. "Terminal Care: Present Services and Future Priorities," British Medical Journal 283 (August 29, 1981): 595-9.
- Massachusetts General Hospital Clinical Care Committee. "Optimum Care for Hopelessly Ill Patients," New England Journal of Medicine 299 (12 April 1976): 362-4.
- McPhail, Aileen; Moore, Sean; O'Connor, John; and Christel Woodward. "One Hospitals Experience with a 'Do Not Resuscitate' Policy," Canadian Medical Journal 125 (15 October 1981): 830-6.
- McIntyre, Kevin M. "Medicolegal Aspects of Decision Making in Resuscitation and Life," Cardiovascular Reviews and Reports 4 (January 1983): 46-55.
- Mead, Margaret. "The Right to Die," Nursing Outlook 16 (October 1968): 22-5.
- Miller, Michael B. "Decision-making in the Death Process of the Ill Aged," Geriatrics 26 (May 1971): 105-16.
- Montange, Charles H. "Informal Consent and the Dying Patient," The Yale Law Journal 83 (July 1974): 1632-62.
- Morrison, Robert S. "Dying," Scientific American 229 (September 1973): 55-62.
- Muir, Robert, Jr. "Opinion in the Matter of Karen Quinlan." In Ethical Issues in Death and Dying, pp. 285-97. Edited by Tom L. Beauchamp and Seymour Perlin. Englewood Cliffs, New Jersey: Prentice-Hall Inc. 1978.
- Nalda, M. A. "The Validity of Starting Resuscitation." In Recent Progress In Anesthesiology and Resuscitation, pp. 749-50. Edited by A. Arias; R.L. Laurado; M.A. Nalda; and J.N. Nunn. New York: American Elsevier Publishing Company, 1975.
- Perman, E. "Successful Cardiac Resuscitation with Electricity in the 18th Century," British Medical Journal 2 (6154) (December 30, 1978): 1770-1.
- Proctor, A. "Pediatric Arrest: Scaling Down CPR," RN 42 (September 1979): 58-64.
- "Quinlan Case Opinion," 137 N.J. Super. 227 (1975), In Death, Dying, and Euthanasia pp. 493-534. Edited by Dennis J. Horan and David Mall. Frederick, MD: University Publications of America, Inc., 1977.
- Quint, Jeanne C. "Of Death: Some Consequences for Patients and Nurses," Nursing Forum 8 (March 1969): 286-300.

- Rabkin, Mitchell T.; Gillerman, Gerald; and Rice, Nancy R. "CPR Policies: The Art of the Possible. Orders Not to Resuscitate," Supervisor Nurse 10 (August 1979): 16-8.
- Rabkin, Mitchell T. "Orders Not to Resuscitate: Part 3," Supervisor Nurse 10 (August 1979): 26.
- Ramsey, Paul. "On (Only) Caring for the Dying." In Ethical Issues In Death and Dying, pp. 163-75. Edited by Tom L. Beauchamp and Seymour Perlin. Englewood Cliffs, N.J.: Prentice-Hall Incorporated, 1978.
- Report by the Task Force on Death and Dying of the Institute of Society, Ethics and Life Sciences. "Refinements in Criteria for Determination of Death: An Appraisal." Journal of the American Medical Association 221 (3 July 1972): 48-53.
- Report of the Critical Care Committee of the Massachusetts General Hospital. "Optimum Care for Hopelessly Ill Patients," Supervisor Nurse 10 (August 1979): 21-25.
- Report of the AdHoc Committee of the Harvard Medical School to Examine the Definition of Brain Death. "A Definition of Irreversible Coma," Journal of the American Medical Association 205 (5 August 1968): 85-8.
- Richards, Victor. "Death and Cancer." In Death: Current Perspectives, pp. 174-97. Edited by Edwin S. Shneidman. Palo Alto, California: Mayfield Publishing Company, 1976.
- Riner, R.M. "Algorithm in Cardiac Resuscitation," JACEP 8 (May 1979): 210-1.
- Robertson, John A. "Involuntary Euthanasia of Defective Newborns: A Legal Analysis." In Death, Dying and Euthanasia, pp. 139-95. Edited by Dennis J. Horan and David Mall. Frederick, MD: University Publications of America, Inc., 1977.
- Saunders, Cicely. "St Christophers Hospice." In Death: Current Perspectives, pp. 513-23. Edited by Edwin S. Shneidman. Palo Alto, California: Mayfield Publishing Company, 1976.
- _____. "The Moment of Truth," In Death and Dying: Current Issues in the Treatment of the Dying Person, pp. 52-7, 59-71. Cleveland: The Press of Case Western Reserve University, 1969.
- _____. "The Last Stages of Life." In The Dying Patient: A Nursing Perspective, 247-56. Compiled by Mary H. Browning and Edith P. Lewis. New York: The American Journal of Nursing Company, 1972.
- Schram, Ronald B.; Kane, John C., Jr.; Roble, Daniel T. "No Code Orders: Clarification in the Aftermath of Saikewicz," New England Journal of Medicine 299 (19 October 1978): 875-8.

- "Severe Handicap in the Newborn: Treatment, Non-Treatment, or Assisted Death." Lancet 2 (8154) (8 December 1979): 1237.
- Shepard, Melba W. "This I Believe: About Questioning The Right To Die," Nursing Outlook 16 (October 1968): 22-5.
- Shusterman, Lise R. "Death and Dying: A Critical Review of the Literature," Nursing Outlook 21 (July 1973): 465-71.
- Smith, David H. "Some Ethical Consideration in Caring for the Dying." In ANA Clinical Sessions American Nurses Association 1974 San Francisco, pp.177-83. New York: Appleton-Century-Crofts, 1974.
- Soare, Pegeen L. and Raimondi, Anthony J. "Intellectual and Perceptual-Motor Characteristics of Treated Myelomeningocele Children." In Death, Dying, and Euthanasia, p. 105. Edited by Dennis J. Horan and David Mall. Frederick, Maryland: University Publications of America, Incorporated, 1977.
- Speilvin, George. "Should 'No Code' be a Death Sentence," RN 44 (November 1981): 94.
- Spencer, Steven S. "Sounding Board: 'Code' or 'No Code', A Nonlegal Opinion," New England Journal of Medicine 300 (18 January 1979): 138-40.
- St-Louis, Peter; Carter, William B.; and Eisenberg, Mickey S. "Prescribing CPR: A Survey of Physicians" Americal Journal of Public Health 72 (October 1982): 1158-60.
- "Standards for Cardiopulmonary Resuscitation (CPR) and Emergency Cardiac Care (ECC)," Journal of the American Medical Association 244 (1 August 1980): 453-509.
- Swenson, Elizabeth; Matsura, Joyce, Martinson, Ida M. "Effects of Resuscitation for Patients with Matastactic Cancers and Chronic Heart Disease," Nursing Research 28 (May/June 1979): 151-3.
- Taub, Sheila. "Withholding Treatment from Defective Newborns," Law, Medicine and Health Care 10 (February 1982): 4- 10.
- Tolstoy, Leo. "Death and the Meaning of Life." In Ethical Issues in Death and Dying pp. 317-24. Edited by Tom L. Beauchamp and Seymour Perlin. Englewood Cliffs, N.J.: Prentice-Hall Inc., 1978.
- Trafford, Abigail. "Doctors Dilemma: Treat or Let Die?" U.S. News and World Report 6 Decmber 1982, pp. 53-6.
- Weber, Leonard J. "Ethics and Euthanasia: Another View," American Journal of Nursing 73 (July 1973): 1228-31.

- Wershow, Harold J., Ritchey, Ferris J., and Alphin, Thomas H. "Physicians Opinions Toward Legislation Defining Death and Withholding Life Support," Southern Medical Journal 74 (February 1981): 215-20.
- Whitacre, James F. "Inappropriate Resuscitation," Respiratory Care 26 (August 1981): 764-5.
- Whitman, Helen H. and Lukes, Shelby J. "Behavior Modification for Terminally Ill Patients," American Journal of Nursing 75 (January 1975): 98-101.
- Veith, Frank J.; Fein, Jack M.; Tendler, Moses D.; Veatch, Robert M.; Kleiman, Marc A. and Kalkines, George. "Brain Death I: A Status Report of Medical and Ethical Considerations," Journal of the American Medical Association 238 (10 October 1977): 1651-55.
- _____. "Brain Death II: Status Report of Legal Considerations," Journal of the American Medical Association 238 (17 October 1977): 1744-8.
- Zimring, Joseph G. "Medical Judgement versus Court Imposed Rules," New York State Journal of Medicine 81 (May 1981): 951-4.

Unpublished Material

- Bruenle, Phillip C. "Potential Graduate Research Projects for FY 82-83 HCA Residents." Disposition Form with Inclosures, Health Care Studies Division, Academy of Health Sciences, Fort Sam Houston, Texas 10 June 1982.
- Threet, Allan R. "The Current Legal Status of the Medical 'No Code' Order." Paper submitted for the Requirements of Medical Jurisprudence, Academy of Health Sciences, Fort Sam Houston, Texas, 29 June 1979.

Interviews

- Deal, Virgil T., Major, Chief, Department of Surgery, United States Army Community Hospital, Fort Stewart, Georgia. Interview 16 December 1982.
- Fuller, Gary L., Colonel, Executive Officer, United States Army Community Hospital, Fort Stewart, Georgia. Interview 14 December 1982.
- Pettyjohn, Frank S., Colonel, Commander, United States Army Community Hospital, Fort Stewart, Georgia. Interview 14 December 1982.
- Segal, Herbert E., Colonel, Chief, Professional Services, United States Army Community Hospital, Fort Stewart, Georgia. Interview 16 December 1982.

Government Publications

Quinn, J. J. "Guidelines for Orders not to Resuscitate" NHBETH Instruction 6320.37, National Naval Medical Center, Bethesda, Maryland, 9 February 1983.

Other Sources

Glitman V. Cosgrove, 49 N.J. 22, 227 A. 2d 689 (1967).

In the Matter of Quinlan, New Jersey Supreme Court, 70 N.J. 355 A. 2d 647 (1976).

In the Matter of Dinnerstein, Massachusetts Court of Appeals, 380 N.E. 2d 134 (1978).

Superintendent of Belchertown State School V. Joseph Saikewicz, Massachusetts Supreme Court, 370 N.E. 2d 417 (1977).