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Attitudes of intensive care nurses toward organ donation

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Attitudes of intensive care nurses toward organ donation

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San Jose State University, 1989

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ATTITUDES OF INTENSIVE CARE NURSES
TOWARD ORGAN DONATION

A Thesis

Presented to

The Faculty of the Department of Nursing
San Jose State University

In Partial Fullfillment
of the Requirements for the Degree
Master of Science

By

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August 1989

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ABSTRACT

This descriptive study looked at ICU nurses' attitudes about organ donation since enactment of legislation requiring health personnel to approach families about donation. Findings were based on the responses of 112 ICU nurses in 10 San Francisco bay area hospitals.

Findings showed nurses identified potential donors 72% of the time. Physicians primarily decided to call the procurement agency (51%). Nurses decided to call 27%. Nurses approached the family about donation 48% of the time.

While most nurses identified a clear case of brain death, education was needed for complex cases. Most nurses felt their policies and physicians approved of donation (53% and 82% respectively). Many nurses (65%) did not object to donor care and 75% personally desired donation. Of those desiring donation, 55% carried donor cards. Overall, nurses had a greater involvement in donation than seen in an earlier study by Sophie et al. (1983), but fewer personally desired donation.

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Chapter 1

INTRODUCTION

As human organ transplantation has become an accepted medical procedure (Curtin, 1986, p. 7), it has been observed that the need for organs far outstrips the current supply. It has been determined that for every organ that becomes available, there are approximately 3 people awaiting transplantation. Many of these patients die during this waiting period (Task Force on Organ Transplantation, 1986, p. 27).

According to a study conducted by the Center for Disease Control (CDC), the primary cause for this shortage of organs can be traced to the high discomfort level experienced by health care personnel who deal with donors and their families (Bart, Macon, Whittier, Baldwin, & Blount, 1981, p. 379). Reasons for this discomfort vary, but have been linked to: (a) an ignorance of the legal and ethical factors surrounding the organ procurement process, (b) confusion among nurses about their doctors' and hospitals' philosophies toward organ donation, and (c) discomfort in, and ignorance about caring for brain dead patients and their families. For this reason, many families are not approached by medical professionals about the option to donate their family members' organs. Instead, the patient is allowed to succumb (Sophie, Salloway, Sorock, Volek, & Merkel, 1983, p. 265).

In an attempt to deal with the acute organ shortage, the California legislature passed Assembly Bill 631 in 1985. This law requires that each hospital develop a protocol to identify potential

organ donors, contact the procurement agency and discuss the option of donation with the family. This law was then emulated by the federal government which passed Public Law 99-509 in 1987. Along with this legislation have come increased public and professional educational activities.

Using a questionnaire developed by Sophie et al. (1983), this investigator surveyed the nursing staff in 10 selected San Francisco bay area intensive care units (ICU). It was hypothesized that by contrasting the results of this study to those of Sophie et al., that an inference could be made whether ICU nurses had developed different attitudes, knowledge or perceptions about the organ donor process since the enactment of this legislation. ICU nurses were chosen because 95% of potential donors die in the ICU (Stark, Reiley, Osiecki, & Cook, 1984, p. 401).

Problem Statement

This investigation involved the use of a questionnaire given to ICU nurses. The questionnaire explored the nurses' attitudes toward organ donation. Questions examined: (a) their understanding of key individuals in the organ donor process, (b) their knowledge of organ donor criteria, (c) their perceptions of the attitudes of selected physicians and hospital policies, (d) their experiences with organ donation, and (e) their reactions to those experiences. These findings were then contrasted with those obtained by Sophie et al. in 1983.

Purpose and Need

The purpose of this study was to determine ICU nurses' attitudes, knowledge levels and perceptions of key individuals in the organ donor process. Their perceptions of the attitudes of some physicians and hospital policies toward organ donation were also explored, as were their reactions to any experience with organ donors. It was important to elicit this information so that inferences could be made about whether a difference in attitudes could be seen since the inception of recent legislation about organ donation, and a subsequent increase in public and professional education.

This information should be useful to education providers in tailoring their educational offerings on organ donation. Also, this study has implications for increasing nurses' self-awareness of their attitudes and the effect of these attitudes on their behaviors.

A positive change in attitudes, knowledge and perceptions about organ donation should assist in increasing the number of organ donors identified and organs made available for transplantation. An increase in the number of organs will help to decrease the acute organ shortage.

Research Questions

1. What are the knowledge levels and attitudes of intensive care nurses in selected San Francisco bay area hospitals toward organ donation?

- a. What are the ICU nurses' perceptions of the identities of key individuals in the organ donor process?

b. What are the ICU nurses' knowledge levels of organ donor criteria?

c. What are the attitudes of neurosurgeons/neurologists and hospital policies, as perceived by the ICU nurses?

d. What are the ICU nurses' reactions to caring for organ donors and their families?

e. What personal and professional experiences have the nurses had with the organ donation process?

2. When contrasted with the results reported by Sophie et al. (1983) is there a difference in ICU nurses' attitudes?

Definition of Terms

1. Organ donation is the act of successfully identifying and facilitating the removal of organs from brain-dead patients for the purposes of transplantation. This term is frequently used interchangeably with the terms organ procurement and organ transplantation.

2. Organ transplantation is the act of removing organs from a brain-dead patient and implanting them in another patient.

3. Organ donor is a patient who meets the criteria for brain death and subsequently has his organs removed for transplantation.

4. Organ Transplant Coordinators are persons, usually Registered Nurses, that are employed by an organ transplant agency. Usual responsibilities are: (a) coordinating the nursing care of organ donors in the hospital, (b) ensuring that all legal criteria are met,

(c) interacting with the families of donors, and (d) providing guidance and education to hospital staff on an on-going basis. Finally, they coordinate the surgical teams' arrival at the organ donors' hospitals for organ procurement and the arrival of the waiting recipients at their hospitals, in anticipation of receiving the procured organs. They are also known as donor coordinators.

5. Ventilatory support is the act of mechanically breathing for a patient who has lost the ability to do so on his or her own, in this case, because of the death of the patient's brain stem.

6. Brain stem is an area in the base of the brain responsible for many of the basic reflexes necessary for life such as stimulating the need to breathe. When a patient is judged to have all reflexes that emanate from the brain stem absent, he is considered brain-dead.

7. Viral encephalitis is an inflammation of the brain that may result in the brain death of a patient.

8. Subarachnoid hemorrhage refers to ~~an~~ specific area of the brain that has experienced a bleeding episode. When the bleeding is extensive, it can result in brain death.

9. Intensive care unit (ICU) is a specialized unit in an acute-care hospital where the most critically ill or injured patients are cared for.

10. Intensive care nurses are licensed registered or vocational nurses who are employed in the intensive care units of hospitals.

11. Neurologist is a physician who specializes in the diagnosis and treatment of illnesses and injuries to the brain.

12. Neurosurgeon is a physician who specializes in surgery to the brain.

13. Trauma System is a system set up by a county's Board of Supervisors to appoint a limited number of hospitals who meet certain training and personnel criteria to treat all seriously injured patients in their county.

14. Designated Trauma Center is a hospital chosen by the county Board of Supervisors to receive all traumatically injured patients in their community.

15. ER is a medical abbreviation for emergency room.

16. Knowledge is an acquaintance with facts, truths or principles, as with a particular subject or branch of learning.

17. Attitudes are learned responses that reflect attraction or repulsion for a stimulus. Feelings (affect), knowledge (cognition), and behaviors from previous experiences create the cultural traces that define attitude.

18. Perceptions are an awareness derived from sensory processes, of the attitudes of others.

Research Design

The study design was descriptive. Intensive care nurses employed in 10 San Francisco bay area acute-care hospitals were surveyed using a questionnaire. The questionnaires were distributed directly at staff meetings or placed in the nurses' mailboxes by the investigator or the

ICU nurse supervisor. The method selected was that chosen by the ICU nurse supervisors. The investigator also attended some staff meetings to introduce the questionnaire, as requested by the ICU supervisors. The investigator followed up with a telephone call to the supervisor one week after distribution to encourage a response. The questionnaires were mailed to the investigator in a self-addressed, stamped envelope or collected by the supervisors in sealed envelopes that were then collected and analyzed by the investigator.

The method of analysis consisted of calculating percentages for each type of closed-ended response received. Open-ended questions were analyzed for consistent themes, and then percentages were calculated. These percentages were then contrasted with those obtained in the study conducted by Sophie et al. (1983).

Sample and Setting

The sample included 112 nurses employed in the intensive care unit setting. These nurses functioned as staff nurses or unit supervisors and educators. Participation was voluntary and anonymity of individuals was assured.

The setting was the subjects' place of employment in 10 acute-care hospitals in the San Francisco bay area. Permission to administer the questionnaire to the ICU nurses was obtained from the person(s) identified by the Director of Nursing or ICU nurse supervisor as being authorized to render this decision. These authorization letters are included in Appendix A.

Instrument

The questionnaire utilized for this study was originally developed by Jeffrey Salloway, Ph.D., and is discussed in the article by Sophie et al. (1983). Permission to use this tool for this study is included in Appendix B. The tool was determined to be reliable and to have content validity through a pilot study that consisted of monitoring calls to organ transplant coordinators. Field notes were kept and analyzed for consistent themes.

In-depth interviews were subsequently conducted with organ transplant coordinators across a wide geographic area and compared for consistency. These activities provided the foundation for the development of this questionnaire (p. 262). This tool has also been validated further by use in this prior study. The questionnaire consisted of 34 open- and closed-ended questions about ICU nurses': (a) attitudes, (b) perceptions of key individuals in the organ donation process, (c) awareness of donor criteria, (d) perceptions of the attitudes of key physicians and hospital policies toward organ donation, (e) experience with donation, and (f) their reactions to that experience.

Knowledge was tested by a series of four vignettes. Perception of key individuals was accomplished by asking four multiple-choice questions about who was responsible for different aspects of the procurement process. Two questions were asked about their perception of the attitudes of the neurologists, neurosurgeons and hospital

policies regarding approval, disapproval, or neutral feeling about donation.

The nurses were asked if they approved, disapproved, were neutral, or did not know how they felt about organ donation and if they carried a donor card. They were also asked to write their feelings about organ donation and their reactions to participating in the nursing care of the potential donor and his/her family. The remaining multiple choice and yes/no questions asked about the nurses' professional and personal experiences with organ donor patients and recipients and if they had received training about organ donation.

Demographic data was obtained about the respondents': (a) age, (b) job title, (c) years of nursing and ICU experience, (d) religion, (e) sex, (f) level of nursing education, (g) if their hospital was a designated trauma center, (h) if their ICU had a designated organ donor liaison, and (i) how many beds were in their ICU. An example of the questionnaire is included in Appendix C.

Each ICU nurse was required to return a signed consent form to participate in this study. The consent form outlined all risks and benefits associated with this study. The consent form is included in Appendix D. Study participation caused no foreseeable harm. If any question caused distress, the subject could decline to answer.

Participants did not receive compensation. The consent forms were returned to the author with the questionnaires and they were separated, to assure confidentiality. All participants received a copy of the consent form for their files.

Scope and Limitations

The study was limited to the intensive care units that were contacted by the author and who granted permission to distribute the survey. Two hospitals subsequently were unable to participate due to lengthy nursing labor disputes. The subjects included only those staff employed in the intensive care unit.

An initial limitation was the characteristics of the hospitals. They were all community hospitals. None were teaching hospitals that were involved in the training of physicians. This may limit how the data generated can be generalized. Two hospitals were designated trauma centers. Six hospitals were located in counties that did not have a designated trauma system and received some trauma victims.

Another limitation was the use of mail surveys. It is possible that the respondents felt the need to be seen in a favorable light. This may have caused some subjects to respond in less than a candid way. Also those not comfortable with the topic may have chosen not to participate.

It may be that the sample size was too small to generalize the data. The results could not be compared conclusively to those generated by Sophie et al. (1983) as this investigator could not obtain the original results of that study. Another limitation may be that the author was the only judge coding the open-ended questions for tabulation. Finally, it cannot be inferred that the results can be applied to non-intensive care nurses or other health professionals.

Chapter 2

CONCEPTUAL FRAMEWORK AND REVIEW OF LITERATURE

Conceptual Framework

The conceptual framework for this study involved two theories. The first, developed by Freedman, Carlsmith and Sears (1970), is that attitudes are made up of three mutually interdependent and interrelated components: (a) the cognitive component, (b) a feeling (affective) component, and (c) an action tendency. The cognitive component is made up of one's thoughts, beliefs and knowledge about an idea or object; the feeling component consists of one's emotional attachment to the beliefs. The action tendency refers to the willingness to respond in a particular way. The action tendency results from the cognitive and affective interaction (Freedman et al., 1970, pp. 246-247). Freedman et al. propose how attitudes are learned in much the same way as habits, through the processes of association, reinforcement and imitation. These attitudes provide regular patterns of behavior in normal situations encountered in day to day living (p. 252).

The second theory is discussed by Salloway and Volek (1987) and concerns the actions of persons who are confronted with a situation for which they have no "cultural traces," or established way to behave. This is certainly true for the family of the organ donor patient and is frequently true for the medical professionals with whom the family must interface. The family has the final authority about decisions concerning the donation of their loved one's organs.

However, when they are approached about donation, they have no standards of behavior for coping with the situation. They will turn for guidance to the medical team who are frequently no more prepared to cope with the situation than the family (pp. 37, 42). It is because of this that the medical team may be reluctant to approach the family at all (Sophie et al., 1983, p. 263).

Salloway and Volek (1987) state that for the community and health care team to begin to establish these cultural traces, they must raise the issue in both the lay and professional literature and cause both groups of people to form positive attitudes about the topic of donation. Also, exposure to in-service classes and other staff who have cared for organ donors will help to establish cultural traces for health care professionals (pp. 36-37). Then, when the health care team is called on to approach the family, the cultural traces will have been established in the community and with the health providers. These cultural traces will help to provide guidance for the family that is faced with a decision about organ donation. The interaction of cultural traces and attitudes in the general public and the health care community, and their impact on the affected family are shown on the following page.

Figure 1. Interaction of Cultural Traces and Attitudes Between Communities and Health Care Professionals and Their Impact on the Families' Attitudes in the Organ Donor Process

The California state and federal mandates concerning organ donation are another example of the communities' impact on attitudes that are stirring hospital personnel to investigate organ donation. This is indicated by the marked increase in organ donation courses offered in hospitals. This study investigated whether the increase in

interest has altered nurses' attitudes about organ donation and their perceptions of other health team members' attitudes. Not until health care professionals establish cultural traces by learning about organ donation and then develop an informed, positive attitude that is supported by the community, will families find the assistance to make a decision about their family member that is right for them.

Literature Review

It was in 1954 that doctors in Boston performed the first successful organ transplantation. This was a kidney transplant between identical twins (Merril, Murray, Harrison, & Guild, 1956, pp. 277-279). Organ transplantation has made remarkable strides since that time. In 1967, Barnard reported the first successful human heart transplant (pp. 1271-1274). Since that time, organ transplants have become almost routine, and the types of organs transplanted continue to grow. Currently, organs that are procured for transplantation include the heart, lungs, liver, kidneys, pancreas and the heart-lung combination (Task Force on Organ Transplantation, 1986, pp. 17-19). Survival rates for organ recipients range from 50-60% for hearts (Brown, August, 1986) to 95% for kidneys, after one year. Seventy five percent of the kidney patients have reported a marked improvement in their quality of life (Task Force on Organ Transplantation, 1986, p. 17). Similar findings are being seen with heart recipients (Evans & Broida, 1985, p. ES-20).

In light of the benefits to be had by organ transplantations, what are the difficulties? Primarily, the difficulties center around the acute shortage of donor organs available for transplantation. According to the Task Force on Organ Transplantation (1986), for every donor organ that becomes available, there are approximately three persons awaiting transplantation. This figure was arrived at by comparing the number of persons on waiting lists at transplant centers to the number of organs donated. The 1986 report cited an earlier 1984 report that stated 84 adults and 27 children died over a two year period waiting for liver transplants at the University of Pittsburgh. At the Montefiore Medical Center in New York, 25 out of 30 patients died over a two year period waiting for a lung transplant. At Stanford University Medical Center, one out of every three candidates dies waiting for a donor heart (p. 27). Copeland (1985) cites a similar experience at the University of Tucson where 25% of their candidates die waiting for a heart transplant (p. 499).

Starnes, Brown and Baldwin (1986) have estimated the number of patients awaiting heart transplants at 100 nationwide at any given time. Liver and pancreas patients waiting for organs are counted at 300 and 30 respectively (p. 66).

According to Cover and Shinn (1983), the number of patients awaiting organ transplants has greatly increased each year as the criteria for transplantation have eased (p. 131). The increase in candidates is being experienced while there is a further decrease in

the number of available organ donors because of the introduction of seat belt laws and the increased use of children's car seats (Manninen & Evans, 1985, p. 3111). In light of this shortage, other modes of treatment are being attempted such as the artificial heart (Stetich, Empey & Sasmore, 1986, pp. 475-486) and cross-species transplants as seen in the highly publicized "Baby Fae" case (Navarra, 1987, p. 9) where a baboon heart was placed in a human infant. To date, these treatment modes have been only minimally successful.

What is the cause of this shortage? First, it is important to realize that organs can be retrieved only from those victims who are brain-dead but continue to maintain a beating heart. The California Hospital Association Consent Manual (1982) quotes the California Health and Safety Code Section 7180 which defines both clinical death and brain death as legal criteria for death:

An individual who has sustained either (1) irreversible cessation of circulatory and respiratory functions, or (2) irreversible cessation of the entire brain, including the brain stem, is dead. A determination of death must be made in accordance with accepted medical standards (p. 211).

The 1982 manual then goes on to list these standards. Testing procedures are clearly outlined and include confirmation by a second physician (pp. 211-214).

The Task Force on Organ Donation (1986) cited a study conducted by the Council on Scientific Affairs (1981) that claimed the widely quoted figure of 20,000 persons who meet the criteria of brain death each

year in the United States (p. 35). To validate this claim, the Task Force commissioned a literature search and analysis of available data. Sixteen different studies that estimated an annual number of potential donors were looked at. An extreme variation in numbers was noted that ranged from 0.77 to 18.0 (expressed in potential donors per 100 hospital deaths). The Task Force noted that this cast great doubt on the reliability of the data as a whole, but concurred that the potential donor pool lies between 17,000 and 26,000 donors per year. Of these it was estimated that only 3,290 donors were utilized in 1984 (p. 35). Obviously the shortage is not in the number of donors available in the hospital, but in the utilization of these donors. To understand the lack of utilization, one must look further at three areas: (a) the public's perception of the organ donor process, (b) the health professional's perception of the organ donor process, and (c) the legal implications of the organ donor process.

The public's attitudes and perceptions are complicated by many factors reflected in the various polls that have been conducted. Koop (1983) cited a 1983 Gallup poll that showed 93% of Americans had heard about organ transplantation. This level of awareness was relatively constant across all demographic groups, except that 95% of whites were aware versus 84% of blacks. Seventy two percent of those aware said they would likely give permission to have the kidneys of a loved one donated after death and half said they would donate the organs of their children in the event of accidental death. However, only 24% would consent to the donation of their own kidneys after death. Those most

likely to donate their kidneys were those who had more education and were in higher income brackets. Blacks were less likely (10%) to donate than whites (27%) (pp. 566-567).

Manninen and Evans (1985) conducted a telephone survey of 2,056 respondents. They found that 93.7% of Americans had heard of organ donation. Fifty three percent were willing to donate the organs of a loved one and that 50% were willing to donate their own organs. Of these, only 19.2% carried donor cards on their driver's licenses. The vast majority of those who had heard of organ donation had received their information primarily from television, magazines and newspapers (p. 3112).

Manninen and Evans (1985) concluded that while people expressed an attitudinal inclination toward organ donation, they either did not behave as potential donors by not carrying donor cards, or were uncertain how to behave. It was felt that if these persons were encouraged, that as much as 80% of the U.S. population would be willing to donate (p. 3112). It was also discovered that an understanding of the concept and prerequisite of brain death needed for organ donation may be lacking (p. 3113).

To involve the public in a commitment toward organ donation, Assembly Bill 1455, the Uniform Anatomical Gift Act (UAGA) was enacted. Passed in California in 1970, this law provides for the cards that can be carried on the back of a driver's license giving consent for the donation of one's organs in the event of brain death. The signing and carrying of this card is voluntary.

Assembly Bill Number 1455 also outlines who may give consent in the event a victim does not have a card. The implementation of this law has been carried one step further by the organ transplant coordinators who seek consent for donation from the family members even if a donor card is available. Phyllis Weber, Director of the Northern California Transplant Bank (NCTB), in San Francisco said this was felt to allow the families a part in a crucial decision regarding their loved one (personal communication, October 18, 1987).

Some version of the UAGA has existed in all fifty states since 1973 (Koop, 1983, p. 567). How effective has this bill been in increasing the number of organ donors? Overcast, Evans, Bowen, Hoe, and Livak (1984) conducted a telephone survey in all fifty states and the District of Columbia using a questionnaire. They contacted organ procurement agencies in the 41 states that had such agencies and interviewed the donor coordinators. In the remaining nine states, the office of the attorney general was contacted for citation of the brain death act and the state's version of the UAGA. Then information was gained by calling a chosen hospital and speaking with nurses and physicians about their donation procedures, using the questionnaire (pp. 1560-1561).

The results obtained by Overcast et al. (1984) showed that no state required that an individual must indicate whether one wants to be an organ donor on his or her driver's license. As a result, the percentage of drivers designated as donors was estimated from only 1.7% to 8.5%. The exception was Colorado, which had the donor box to be

checked embossed on the front of the license. Here, the number of designated drivers willing to donate was 1.5 million, or 60% of all drivers (p. 1560).

This investigator questions the sources of information used to determine the above figures because as a study later reviewed shows (Sophie et al., 1983, p. 264), many hospital personnel are unaware of their hospital's policies and related laws. This investigator feels that direct contact with the public, as was used in the study conducted by Manninen and Evans (1985), would elicit a more correct representation of the number of donor cards in use.

The study by Overcast et al. (1984) does seem to show, however, that when a space is included in the format of the license, versus an optional card which can be attached and then covered within the fold of a wallet, the majority of drivers are more willing to make a commitment. Beyond this, it is apparent that the majority of the public has not yet taken the steps toward a commitment to organ donation, regardless of their feelings.

Parisi and Katz (1986) administered a questionnaire to 106 non-random participants of which 87% were from lower to middle management positions in Wall Street firms and 13% were students in a university. The questionnaire utilized an organ donation attitude scale and a behavior commitment scale. They found that 90% of the respondents would accept organs from another person, from another ethnic group (91%) or from the opposite sex (90%). A smaller majority said they would accept an animal organ (65%) or an artificial device (76%).

Higher levels of education were associated with more skepticism toward transplant effectiveness, but not with a willingness to donate (p. 573).

A cluster analysis was done by Parisi and Katz (1986) on the attitude scale. A positive cluster was found around items which stated that willing organs increased pride and gained respect. Negative clusters were around items on fear of inadequate medical treatment and fear of mutilation (p. 572). A relationship was attained between positive attitudes and commitment by asking these persons if they would sign a donor card or would like to receive more information. Of 106 persons, 36 wanted no information or to sign a donor card. Seventy persons showed a willingness to sign or receive information and 43 of these made a commitment by providing an address to receive a donor card (p. 570).

As these studies indicate, while ambivalence may be present, a clear majority of Americans feel moderately to very positive about organ donation. This concurs with the experience of Phyllis Weber of NCTB, who stated a consent rate of 75%, when approaching families of victims about donation (personal communication, October 18, 1987).

Health professionals have shown an equal amount of ambivalence and confusion toward donation. Abram, Zwaag and Johnson (1975) conducted a study using a questionnaire by mail. Of 1,100 physicians polled in the Nashville area, 543 (49.3%) responded. The researchers found that only 7.4% carried donor cards, although 54.1% expressed a desired to donate their organs. Eighty nine percent of the physicians under 40 felt that

transplantation was an effective mode of treatment, while 82.2% of those doctors over 40 felt it was effective (p. 444).

Falvo, Woehlke and Tippy (1987) conducted a study designed to assess resident doctors' attitudes toward organ donation and how these attitudes influence advice they may potentially give to families. Sixty four residents were asked to complete a questionnaire. Seventy nine percent responded. Ninety percent of those responding felt favorably toward donating their own organs. Of these, 25% expressed some concern or negative feelings. Nearly half stated that they knew very little about organ donation and 26 residents did not know how to set the donation process in motion. A large majority also expressed concern about the families' feelings and of the possibility of declaring premature death. Only 17% had signed a donor card. A high degree of congruence was found between the residents' own attitudes and the advice they would give families. They concluded that, while the residents largely agreed with the donor concept, their inadequate knowledge and concern for the families' feelings might cause them to not approach the families about donation (pp. 744-749).

Tolle, Bennett, Hickam and Benson (1987) wrote about the reluctance of physicians to become involved in the procurement process, citing these same reasons for a recovery rate of less than 20% of the potential donors. Another reason given for reluctance was ignorance regarding brain death criteria. These authors stressed the importance of the availability of an organ transplant coordinator who is available for 24 hour consultation (pp. 741-742).

Another reason stated for lack of involvement was a reluctance to approach the family. As a result, several survivors expressed regret over not having been offered the opportunity to donate, an option not visible to them while grief-stricken (p. 740). This raised a little known issue, that of comfort derived by the family from the donation process. Tolle et al. (1987) stated that in previous interviews with 105 surviving spouses one year after their husband's or wife's death, all who had consented to donation had strong positive feelings about their experience. Survivors often spoke of how some good had come from their loss (pp. 742-743).

Tolle et al. (1987) recommended that the transplant coordinator also be utilized for approaching the family, to help the physician avoid any feelings of conflict in their roles as healers and advocates of potential recipients elsewhere (p. 742). This investigator found this attitude somewhat limited. While an organ donor coordinator is trained to deal with a grieving family in crisis and many physicians are not, this recommendation does not acknowledge the support that the physician or nurse can provide by offering donation as an option in this hopeless situation. Many physicians also do not realize that any further cost of care of the donor will be borne by the recipient in the event that the donor is utilized.

Stark, Reiley, Osiecki and Cook (1984) conducted a pilot study investigating the attitudes that influence donation in the intensive care unit. Methodology consisted of recruiting nurses from a local chapter of the American Association of Critical Care Nurses whose

member-volunteers were trained to administer a seven-item questionnaire to members of participating hospitals each time a donor was identified (p. 402).

Twenty six questionnaires were returned. Of these, only eight donations actually took place. Of the remaining 18 patients, seven were rejected because of the physiological unsuitability of the patients. Physician reluctance caused by fear of litigation was cited as the main reason in six cases. In two cases, the physician decided that the family would not agree without approaching them. Family refusal was cited in three cases. Stark et al. (1984) concluded that donation caused nurses and others to examine their beliefs on life, death and how medical professionals expect to cure patients. Anything less, such as admitting that a patient is brain-dead is to admit failure (pp. 400-401). The possible benefits of donation in easing the families' grief are not seen. It was concluded that education of medical personnel was needed about the legal facts of donation and the benefits that can be reaped by the family of the donor (pp. 402-403).

In a survey of 560 nurses conducted by Sophie, Salloway, Sorock, Volek, and Merkel (1983), it was found that while 63% of the nurses were responsible for identification of the patient as a possible donor, only 17% of the nurses then made the decision to approach the family. Sixty five percent of the nurses ascribed this role to the physician; in fact, this is a role that is not outlined by law to be physician-initiated. It is interesting that while 86.8% of the nurses approved of organ donation, they believed that only 41.8% of the neurosurgeons/

neurologists approved, creating a communication barrier about donation. Sophie et al. (1983) went on to note that 25% of the nurses were unaware of their hospital's policy regarding organ donation (p. 263). It was concluded that the nurses' willingness to recognize patients as potential donors was affected by their perceptions of their hospital policies or the approval of the physicians (p. 264).

Sophie et al. (1983) described the time of donor identification as a decision point because it now implied that someone would have to approach the family with an evaluation that is difficult for both the family and staff. Because of this discomfort, frequently no one ultimately approaches the family for consent, although the patient was identified as a donor (p. 263). The questionnaire used in the study by Sophie et al. was also used for this research project.

Bart, Macon, Whittier, Baldwin and Blount (1981) conducted a study for the Center for Disease Control (CDC) using a retrospective analysis of medical records of patients who had expired in the southeastern United States. Their purpose was to discover the number of potential kidneys for donation and their characteristics. They found that only 19.3% of the potential donor kidneys were retrieved (p. 380). The reason for this low recovery rate was attributed to a failure to make potential donors into actual donors by not identifying them (p. 381).

Bart, Macon, Humphries, Baldwin, Fitch, Pope, Rich, Langford, Teutch and Blount (1981) undertook a second study for the CDC to explore how to increase organ donation. They conducted education programs on a continuing basis in 34 southeastern hospitals. They also

recruited and trained medical personnel to conduct active surveillance in the hospitals. These persons consisted of emergency doctors, nurses, neurologists and social workers, among others. They reported their findings to a transplant coordinator who oversaw this operation. Surveillance was performed by medical chart review. As a result of this intensive effort, the CDC saw an eight-fold increase in the number of donors in the three years that the study was conducted (pp. 383-385).

It is apparent in each of the above studies that a high discomfort level is experienced by hospital professionals when they are exposed to this highly emotional situation for which they have minimal knowledge and therefore a weak behavioral tendency to get involved. This may be the key element in the failure of the organ procurement system.

To combat this situation, state and federal legislatures have conducted hearings and composed legislation about organ donation. Sadler and Sadler (1984) wrote a frequently quoted article discussing the different types of legislation that can be enacted to impact on organ donation. The Uniform Anatomical Gift Act is an example of volunteerism and informed consent. If people do not want to commit themselves, they simply do not sign a donor card. As shown, this has been very ineffective (p. 7).

A second type of legislation discussed by Sadler and Sadler (1984) could involve the concept of presumed consent. Presumed consent would involve the routine salvaging of any organ unless the family or donor

specifically objected (p. 8). As pointed out by Stuart, Veith and Cranford (1981), presumed consent is routine in many European countries (p. 239).

The Task Force on Organ Transplantation (1986) looked at the issue of presumed consent and rejected it. They concluded that organ donation in the United States is and should be based on the concepts: (a) respecting individual autonomy, (b) promoting a sense of community through acts of generosity, (c) showing respect for the decedent, and (d) showing respect for the wishes of the family (p. 27-28).

Working from this perspective, the Task Force on Organ Transplantation (1986) recommended the third type of legislation referred to as "routine inquiry" or "required request." Routine inquiry places responsibility on hospital personnel to approach the family, providing the option of donation, if all other donor criteria are met (pp. 32-33). California was a leader in the concept of routine inquiry in 1985, when Assembly Bill (AB) 631 was passed. Known as the Leonard bill after the congressman who authored the bill, AB 631 required that each hospital develop a protocol to identify potential organ donors, contact the procurement agency and discuss the possibility of donation with the family.

In 1987, the federal government passed legislation modeled after California's law. As of November 1987, Title XI of the Social Security Act was modified to include Section 9318, Hospital Protocols for Organ Procurement and Standards for Organ Procurement Agencies. This law,

known as Public Law 99-509, requires each of the components of the California law, but penalties are now linked to Medicare reimbursement.

This legislation is expected to impact greatly on the number of organs available nation-wide for transplantation. Finally, the responsibility for organ donation rests on the health professionals who can no longer deny their obligation to the community and the grieving families.

The Task Force on Organ Transplantation (1986) has recommended professional education programs to assist in alleviating the organ shortage (pp. 45-47). Many public and private organizations have responded with community and professional programs aimed at increasing the support for organ donation. It is felt that if hospital professionals are provided with the knowledge and techniques with which to identify the potential donors and approach the families, and are backed by a supportive community, that health professionals will no longer shirk this crucial responsibility. This study looked at how ICU nurses were responding to the above activities.

Chapter 3

METHODOLOGY

This chapter presents the research methodology of the study. Included in the methodology is a description of the data collection instrument, research design and data analysis.

Data Collection Instrument

The survey questionnaire was designed and developed by Jeffrey Salloway, Ph.D. of Rush-Presbyterian-St Luke's Medical Center (Chicago) and was administered by Laura Ruse Sophie, et al. (1983) in the Northern Illinois-Indiana area. Permission was obtained from Dr. Salloway (See Appendix B) for the use of the questionnaire in this study.

Description of the Salloway

Organ Transplantation Questionnaire

The Salloway Organ Transplantation Questionnaire (S.O.T.Q.) consisted of 34 open- and closed-ended questions. These questions were designed to represent the following areas of investigation:

1. Attitudes toward organ donation.
2. Perceptions of the identities of key individuals in the organ donor process.
3. Awareness levels of organ donor criteria.
4. Perceived attitudes of the neurosurgeons/neurologists and hospital policies.
5. Reactions to caring for a patient who is brain-dead.

6. Professional and personal experiences with organ donation.

When completing the questionnaire, the participants were instructed to select one option provided or fill in a response. A complete discussion of the items in the S.O.T.Q. tool follows in the review of Data Analysis.

Reliability and Validity of the Salloway

Organ Transplantation Questionnaire

Sophie et al. (1983) conducted a two-phase pilot study to establish the reliability and validity of this instrument. Phase one provided the basis for reliability testing and consisted of three social scientists monitoring and following telephone calls from "donor hospitals" to organ transplant coordinators from initial contact until final distribution of organs. Field notes were kept and analyzed for consistent themes. Content validity was subsequently established via in-depth interviews with organ transplant coordinators across a wide geographic area and compared for consistency. Operating procedures and coordinator perceptions of the ICU nurses' roles were also compared across geographic and organizational structures for organ recovery. These activities provided the basis for the development of this questionnaire (p. 262).

Sophie et al.'s (1983) larger study constituted phase two. Here, the developed questionnaire was distributed. Their population consisted of 560 nurses in 27 hospitals in the northern Illinois-Indiana area. Their return rate was 55.7%. Qualitative data obtained

were coded by two judges for computer tabulation with the remaining quantitative data. This two-part methodology provided the advantages of hypothesis generation and in-depth observation associated with qualitative methods, as well as the reliability and generalizability associated with quantitative methods (p. 262).

Research Design

Setting and Sample

This study was conducted at 10 San Francisco bay area hospital Intensive Care Units (ICU) in five counties. Each hospital received a questionnaire for each staff nurse, nurse supervisor and nurse educator who was actively employed in the ICU. General medical-surgical, neurosurgical and pediatric ICUs were chosen. Cardiac ICU staff nurses, supervisors and educators were included if requested by the participating hospitals. Ultimately, a total of 320 instruments were distributed. The sample population was 112 nurses. Participation in this study was voluntary and there was a return rate of 35% with a 65% refusal rate.

Data Collection

The participating hospitals were chosen either from the telephone directory or from those hospitals to which the author was able to gain access, either from previous employment or by introductions made from other contacts. Fifteen hospitals were contacted by telephone. Twelve hospitals agreed to participate. The initial person contacted was either the Director of Nursing or the ICU nurse supervisor. This

contact was followed up with a copy of the questionnaire and the consent form being mailed to them.

Ultimate approval was granted by the person(s) identified by the initial contact person as being authorized to do so. One hospital required that a copy of the study proposal and questionnaire be reviewed by their in-house Nursing Research Committee. Two hospitals requested a personal interview with the investigator and three hospitals requested that the investigator attend a staff meeting to explain the purpose of the questionnaire. The consent letters are included in Appendix A.

Data were collected from July through September of 1988. The investigator delivered the instruments to ten of the facilities. The remaining instruments were mailed at the request of the approving persons. Two hospitals were subsequently unable to participate due to lengthy nursing labor disputes that occurred after the questionnaires were delivered for distribution.

The instrument package included a cover letter, the questionnaire (see Appendix C), two consent forms (see Appendix D) and an envelope for return of the documents. The purpose and nature of the study was explained to the participants via the cover letter. The participants were asked to sign one consent form with the understanding that their responses would be completely confidential. The second consent form was to be retained for their records. The instruments were placed either in the participants' mail boxes by the investigator or the supervisor, or distributed at their staff meetings. The method chosen

was that requested by the approving person(s). The completed instruments were either collected by the supervisor in sealed envelopes to be picked up later by the investigator, or mailed directly to the investigator. The results of this study were made available to the participants in their work setting, if desired.

Data Analysis

Descriptive data gathered for this study were tabulated by calculating percentages for each closed-ended question. Consistent themes were determined for the open-ended questions and then percentages were calculated. These percentages were then contrasted with the results reported by Sophie et al. (1983). The survey items were divided into attitude, perception, knowledge, reaction and experience questions.

The items that represented perception included questions 1-3 and question 6 that determined the respondents' perception of the key individuals in the organ retrieval process. A multiple choice format asked the respondents to identify the person most frequently responsible for different facets of the organs retrieval process. These facets included: (a) who initially recognized a potential donor, (b) who made the decision to call the organ retrieval team, (c) who actually placed the call to the organ transplantation agency, and (d) who approached the family about the possibility of donation. Options included ICU and ER staff nurses, physicians, nursing supervisory personnel, clergy, family and other. The respondents were instructed to select only one option.

Question 5 explored the subjects' awareness of donor criteria. This was accomplished by presenting a series of four vignettes that described common ICU or ER situations. The respondents were asked to determine which of the patients in the vignettes warranted a call to the organ transplant agency. The four situations included: (a) a head injury patient who was clearly a candidate for donation, (b) a patient with a history of diabetes and hypertension who suffered a subarachnoid hemorrhage and who should be recognized by a medical professional educated in organ donation, (c) a clear case of an unacceptable organ donor who arrived dead at the hospital, and (d) a patient with suspected viral encephalitis whose potential donor status needed to be determined by the organ recovery team, but in which the team should be called to make the evaluation. The subjects were instructed to decide to either call or not to call the organ recovery team by checking the appropriate box in each vignette.

The attitudes of the ICU nurse respondents were determined in question 13 by asking if they approved, disapproved, were neutral or did not know how they felt about organ donation. Question 14 asked in an open-ended format why the respondents felt as they did. In questions 17-18, the respondents were asked in a yes-no format if they personally desired to be an organ donor and if so, did they carry a donor card on their drivers' licenses indicating this. Using the same multiple-choice format, questions 11-12 asked how the nurses perceived that their neurosurgeons, neurologists and hospital policies felt about organ donation.

The reactions of the subjects to caring for a potential donor patient were explored in question 19. This was accomplished by presenting an open-ended question asking the respondents to comment on their feelings.

Finally, scattered throughout the questionnaire was a series of questions that explored the respondents' experiences with organ donor patients, potential organ recipients and if they had received training in the organ donor process. Question 4 asked in a yes-no if the respondents had ever been the person to recognize a potential donor. If so, they were requested in question 4a to write in how many times. In questions 7-7a, they were asked in this same format if they had ever been present or participated in discussions with the family of a potential donor, and if so, how many times. Again, using the same format, in questions 8-8a the respondents were asked if they had ever been present or participated in the surgical removal of organs for donation, and if so, how many times.

Questions 9-10 asked in a yes-no format if the respondents personally knew any end stage renal disease patients or someone who had become an organ donor. Questions 15-16 asked if they had seen any aspect of organ donation as a nursing student or if they had attended any in-service training regarding organ donation. If they had received training, question 16a asked how long ago, and requested the respondents to write in their responses. Questions 26-27 asked if the respondents had any professional experience with dialysis patients or kidney recipients.

Demographic data were obtained in questions 20-25 and questions 28-34 about the respondents': (a) age, (b) job title, (c) years of nursing and ICU experience, (d) religion, (e) sex, (f) level of nursing education, (g) if their county had a system for managing trauma patients and if their hospital was a designated trauma center, (h) how many beds were in their ICU, and (i) if their ICU had a designated organ donor liaison. The results of the questionnaire are reported in Chapter 4. An example of the questionnaire is included in Appendix C.

Chapter 4

ANALYSIS AND INTERPRETATION OF DATA

This chapter presents the analysis and interpretation of data obtained from the survey of ICU nurses concerning their attitudes about organ donation. Sub-questions explored the nurses' (a) perceptions of key persons in the organ donor process, (b) knowledge levels regarding donation, (c) perceived attitudes of their neurosurgeons/neurologists and hospital policies, (d) reactions to caring for organ donor patients, and (e) experiences with organ donation. A second purpose of the study was to contrast the results obtained with those reported by Sophie et al. in 1983. Descriptive characteristics of the sample population are presented and compared, followed by an analysis of the data associated with each research question, and a summary of written comments.

Description of the Sample

The numbers and percentages of the demographic characteristics of the ICU nurses are presented in Table 1. The demographic characteristics studied included: (a) age, (b) sex, (c) religion and if a practicing member, (d) job title, (e) highest level of nursing education, (f) total years of nursing experience, (g) total years in ICU experience, (h) type of ICU employed in, (i) number of beds in the ICU, (j) if their county has a designated trauma system, (k) if their hospital is a designated trauma center, and (l) if their ICU has a designated organ donor liaison.

Table 1
Demographic Characteristics
of Intensive Care Nurses

N=112

Variable	Classification	<u>N</u>	Percent
Age	23 to 29 years	22	20.0%
	30 to 40 years	58	52.0%
	41 to 60 years	26	23.0%
	No Response	6	5.0%
Sex	Female	104	93.0%
	Male	5	4.0%
	No Response	3	3.0%
Religion	Catholic	46	41.0%
	Protestant	43	38.0%
	Jewish	2	2.0%
	Other/None	18	16.0%
	No Response	3	3.0%
Practice Religion	Yes	64	57.0%
	No	38	34.0%
	No Response	10	9.0%
Job Title	Staff Registered Nurse	85	76.0%
	Supervisor	9	8.0%
	Asst. Supervisor/Educator	9	8.0%
	Staff Vocational Nurse	6	5.0%
	No Response	3	3.0%
Nursing Education	Associate Degree	42	38.0%
	Bachelor's Degree	42	38.0%
	Diploma	18	16.0%
	Graduate Degree	5	4.0%
	No Response	5	4.0%
Years Job Experience	1 to 5 years	16	14.0%
	6 to 10 years	36	32.0%
	11 to 15 years	23	21.0%
	16 to 20 years	19	17.0%
	21 to 30 years	13	12.0%
	No Response	5	4.0%

Table 1 (continued)

N=112

Variable	Classification	<u>N</u>	Percent
ICU Job Experience	1 to 5 years	40	36.0%
	6 to 10 years	36	32.0%
	11 to 15 years	19	17.0%
	16 to 24 years	13	12.0%
	No Response	4	3.0%
Type of ICU	Medical-Surgical	95	85.0%
	Other	6	5.0%
	Coronary	5	4.0%
	Surgical	4	4.0%
	Pediatric	0	0.0%
	Medical	0	0.0%
	No Response	2	2.0%
Number ICU Beds	1 to 10 beds	29	26.0%
	11 to 20 beds	79	70.0%
	21 to 30 beds	3	3.0%
	No Response	1	1.0%
County Trauma System	Yes	80	71.4%
	No	24	21.4%
	No Response	8	7.2%
Designated Trauma Center	No	72	64.0%
	Yes	38	34.0%
	No Response	2	2.0%
Organ Donor Liaison	No	69	62.0%
	Yes	34	30.0%
	No Response	9	8.0%
*Title of Liaison	ICU Staff Nurse	16	14.0%
	ICU Supervisor	4	4.0%
	MD	2	2.0%
	ICU Asst. Supervisor	1	1.0%
	Chaplain	0	0.0%
	No Response	10	9.0%
	Not Applicable	79	70.0%

(* Response requested if affirmative response to the previous question)

The sample age ranged from 23 to 60 years with a mean age of 36.1 years. Most of the subjects (N=58) were in the 30-to-40-year range, with 22 in the 23-to-29-year range and 26 in the 41-to-60-year range. The sample consisted of 104 females and five males. The majority of the subjects reported their religious preferences as Catholic (N=46) and Protestant (N=43). Sixty four of those reporting a religious preference stated they actively practiced their religion. The greatest number of respondents gave their job title as staff Registered Nurse (N=85), with 18 reporting as supervisors or educators.

A wide range of educational levels was reported with the majority of nurses graduates of an Associate Arts degree (N=42) or Baccalaureate degree (N=42) nursing program. The nurses had 1 to 30 years of total work experience with a mean of 12.5 years. Fifty two nurses had 1 to 10 years of experience. Forty two nurses had worked a total of 11 to 20 years. Their ICU job experience ranged from 1 to 24 years with a mean of 8.4 years. Seventy six nurses had worked in ICU 1 to 10 years. Thirty two nurses had 11 to 24 years of ICU experience. The majority of nurses were employed in a medical-surgical ICU (N=95).

The number of beds in the ICUs ranged from 6 to 24 with a mean of 12.8. Eighty nurses reported that their county of employment had a designated trauma system, but the majority of the nurses were not employed in trauma centers (N=72). Finally, most of the nurses (N=69) stated that their ICU did not have a designated organ donor liaison.

Of those nurses that reported having a designated liaison, most stated that this person was a staff nurse (N=16).

Analysis of ICU Nurses' Attitudes

Toward Organ Donation

Throughout the questionnaire were items that explored the ICU nurses' attitudes towards organ donation. Influencing factors were also explored. These factors included the nurses': (a) perceptions of key individuals in the donor process, (b) knowledge levels about organ donor criteria, (c) perceived attitudes of their neurosurgeons/neurologists and hospital policies toward organ donation, (d) reactions to caring for a patient who is brain-dead, and (e) personal and professional experiences with organ donation. Each of these areas were then contrasted with those results reported by Sophie et al (1983). These areas are discussed separately in the following sections.

ICU Nurses' Perceptions of Key Individuals

The numbers and percentages represented in Table 2 measured the responses to four items in the questionnaire that explored the ICU nurses' perceptions toward key individuals in the organ donor process. These items asked about various aspects of the donor process and then provided a list of options to choose who was responsible for each aspect.

The results showed that the ICU staff nurse was overwhelmingly the person who most frequently recognized the potential donor (N=77). However, the decision to call the organ transplant program was most often made by the attending physician (N=39), with the ICU staff nurse

Table 2

Responses of ICU Nurses to Four Items
Assessing Their Perception of Key Individuals
in the Organ Donor Process

S.O.T.Q. Item 1: Who is First to Recognize Potential Donor		
Initiator	Responses	N=112
	<u>N</u>	Percent
ICU Staff Nurse	77	68.8%
Haven't Seen Donors	11	9.8%
Neurosurgeon	6	5.4%
Attending Physician	6	5.4%
ER Nurse	3	2.7%
ER Physician	3	2.7%
ICU Asst. Supervisor/Educator	2	1.8%
ICU Supervisor	1	0.9%
Family of Patient	1	0.9%
ICU Physician	0	0.0%
Other	0	0.0%
No Response	2	1.8%
S.O.T.Q. Item 2: Who Decides to Call Organ Recovery Program		
Attending Physician	39	34.8%
ICU Staff Nurse	30	26.8%
Neurosurgeon	12	10.7%
Haven't Seen Donors	9	8.0%
Family of Patient	8	7.1%
ICU Physician	5	4.5%
ICU Asst. Supervisor/Educator	4	3.6%
ICU Supervisor	3	2.7%
ER Physician	1	0.9%
ER Nurse	0	0.0%
Other	0	0.0%
No Response	1	0.9%

Table 2 (continued)

S.O.T.Q. Item 3: Who Actually Calls Organ Recovery Program		
Initiator	Responses	N=112
	<u>N</u>	Percent
ICU Staff Nurse	63	56.3%
ICU Asst. Supervisor/Educator	13	11.6%
Haven't Seen Donors	10	8.9%
ICU Supervisor	9	8.0%
Attending Physician	9	8.0%
Other	3	2.7%
ICU Physician	2	1.8%
Neurosurgeon	2	1.8%
ER Nurse	0	0.0%
ER Physician	0	0.0%
Chaplain	0	0.0%
No Response	1	0.9%
S.O.T.Q. Item 6: Who First Approaches Family About Donation		
ICU Staff Nurse	54	48.2%
Attending Physician	29	25.9%
ICU Physician	9	8.0%
Neurosurgeon	7	6.3%
Haven't Seen Donors	6	5.4%
Other	3	2.7%
ER Physician	1	0.9%
ICU Asst. Supervisor/Educator	0	0.0%
ICU Supervisor	0	0.0%
ER Nurse	0	0.0%
Chaplain	0	0.0%
No Response	3	2.7%

Note. Percentages may total to more than 100 due to rounding to the nearest tenth.

making this decision somewhat less often (N=30). The ICU staff nurse was then most frequently responsible for actually making the call to the program (N=54), followed by the attending physician (N=29). The ICU staff nurse was also identified as the person who most often approached the family about donation (N=54) with the attending physician cited by 29 respondents.

ICU Nurses' Knowledge Levels of Organ Donor Criteria

The responses to four vignettes that measured the ICU nurses' knowledge levels of organ donor criteria are represented in Table 3. The vignettes presented three cases where the organ donor agency should be contacted for possible organ procurement and one case where the organs would not be suitable for procurement. The respondents were asked whether they should call or not call the organ donor agency.

The first vignette involved a young male who experienced a gunshot wound to the head. Medical criteria presented demonstrated a clear case for potential donation. Of the 106 respondents, 89 correctly identified the need to call the donor agency.

The second vignette concerned a male who had experienced a subarachnoid hemorrhage that was complicated by a history of diabetes and hypertension. This was a case that might provide the option for donation, but due to the extenuating illnesses, needed to be reviewed by an experienced organ donor professional. Therefore, the organ donor agency should be called for consultation. The majority of respondents (N=59) felt the patient was unsuitable and therefore no call was

Table 3
Responses of ICU Nurses to
Four Vignettes Assessing Their
Knowledge About Organ Donor Criteria

S.O.T.Q. Item 5			
Vignette	Variable	Responses	N=112
		<u>N</u>	Percent
Head Injury	Call	89	79.5%
	Not Call	17	15.2%
	No Response	6	5.4%
Subarachnoid Hemorrhage	Not Call	59	52.7%
	Call	48	42.9%
	No Response	5	4.5%
Viral Encephalitis	Call	81	72.3%
	Not Call	26	23.2%
	No Response	5	4.5%
Dead on Arrival	Call	56	50.0%
	Not Call	50	44.6%
	No Response	6	5.4%

Note. Percentages may total to more than 100 due to rounding to the nearest tenth percent.

needed. Forty eight respondents, however did feel a call was warranted.

The third vignette involved a young female admitted with a potentially contagious illness, but whose cultures were subsequently negative. It was stated that she met all criteria for brain death. For these reasons, a call to the organ donor agency would have been appropriate. The great majority of respondents agreed (N=81) with only 26 feeling a call was not needed.

The final vignette concerned a patient who arrived at the hospital deceased with no pulse or respirations. This patient was clearly not a candidate for organ donation as a beating heart is necessary. Therefore no call was warranted for organ procurement. Fifty six respondents disagreed with this assessment, while 50 respondents felt no call was needed.

ICU Nurses' Perceptions of the Attitudes of Their
Neurologists, Neurosurgeons and Hospital Policy
Toward Organ Donation

The numbers and percentages represented in Table 4 measured the ICU nurses' perceptions of the attitudes about their neurosurgeons, neurologists and hospital policy toward organ donation. The questionnaire contained two items that first asked about the attitudes of their neurosurgeons and neurologists followed by the attitude toward their hospital policy. Options provided were approval, neutral, disapproval and don't know.

Table 4

Responses of ICU Nurses to Two Items Assessing
Their Perception of the Attitudes of Their Neurosurgeons,
Neurologists and Hospital Policies Toward Organ Donation

S.O.T.Q. Item 11			
Subject	Perceptions	Responses	N=112
		<u>N</u>	Percent
Neurologists/ Neurosurgeons	Approve	59	52.7%
	Don't Know	41	36.6%
	Neutral	10	8.9%
	Disapprove	0	0.0%
	No Response	2	1.8%
S.O.T.Q Item 12			
Subject	Perceptions	Responses	N=112
		<u>N</u>	Percent
Hospital Policy	Approve	92	82.1%
	Don't Know	17	15.2%
	Neutral	2	1.8%
	Disapprove	0	0.0%
	No Response	1	0.9%

The majority of the nurses felt that their neurologists and neurosurgeons approved of organ donation (N=59) with 41 indicating that they did not know and 10 feeling that these physicians were neutral. None felt that these physicians were against organ donation. Ninety two of the nurses believed that their hospital policy toward donation was one of approval and 17 were not sure. None of the nurses felt that their hospital policy was against donation.

ICU Nurses' Reactions to Caring for a Brain-Dead Patient

The responses to this open-ended question are represented in Table 5. Responses were coded by the investigator and frequencies computed. One hundred nurses chose to respond. Forty six stated that caring for the brain-dead patient did not bother them. Some stated that they felt these patients were no different than other ICU patients. Still others found various ways to achieve satisfaction in donor care. One nurse commented:

I don't have a problem with it. It's more of a shame to me to see brain dead people senselessly kept alive on the ventilator.

Another nurse found satisfaction in the team effort required:

I was amazed at the coordination of efforts shown by the ICU personnel and transplant team - to support kidney function, maintain fluid and electrolyte balance, etc. It's nice to be part of the team. We have received several letters of recommendation re: this.

Twenty seven respondents felt that donor care was worthwhile if it helped another. As Sophie et al. reported in 1983, this researcher

Table 5

Responses of ICU Nurses to One Item
Assessing Their Reactions to Participating
in the Care of a Brain-Dead Patient

S.O.T.Q. Item 19		
Reaction	Responses	N=112
	<u>N</u>	Percent
Does Not Bother Me	46	41.1%
Worthwhile Because It Helps Another	27	24.1%
Emotionally Draining/ Ambivalent Reactions	23	20.5%
Subjects the Family to Added Stress	4	3.6%
No Response	12	10.7%

defined "another" to mean either the donor family or a potential recipient. One nurse spoke for many when she wrote:

I feel that it is an important nursing function because I am helping not only the family of the deceased deal with their loss, but I am also helping an unknown potential recipient.

Other nurses gave specific examples of how they had found donor care worthwhile, as did the following nurse:

I have cared for 2 donors - 1 of which was 26, healthy - he was hit by a car while jogging [resulting in] head injuries that killed him - they harvested [his] lungs, heart, kidneys - it makes you feel good when 3 other people can live because of it.

Conversely, 23 nurses felt that the experience was emotionally draining, or were ambivalent. As one nurse wrote:

There is such sadness due to the circumstances of the illness or injuries and because of this, the emotional air about the room is very high. There is much support that needs to be provided for the family, as well as the caregivers...

Still another related the following point of view:

It is somewhat erry [sic] - I still talk to the patient and care for him as though he was "viable." I feel many people shut themselves off to the donor and treat the body as a specimen. But, in the end, I guess being a donor gives some positive end to a traumatic event.

Religious beliefs colored many respondents' statements. One nurse who was personally opposed to donation due to her religious foundations wrote:

Caring for this patient is part of my job as a nurse. If "he" or the family have decided on the donor programs, I will follow through to see those wishes carried out. I have no right, nor would I, try and impress what I believe (for me) on anyone else.

Four respondents believed that donation subjected the donor family to added stress. One nurse wrote:

My heart goes out to that person's family. For most of them it is hard to "let go" as long as they see a body on the vent[ilator] and fluids going into that person.

Another expressed her feelings more bitterly:

I'm sad for the patient's family - grieving, waiting for the harvesters - knowing nothing will change for their loved one anymore.

Many felt the strain of trying to support the families, as did this nurse:

If the patient's illness has been sudden and unexpected, the family often has to work through their grief...They often look to the nurse for advice/support. My feeling is the decision to donate is personal. I don't always feel comfortable giving advice on this issue.

Time was a theme that repeatedly surfaced as a contributing factor to

stress for both the caregivers and the families. One nurse spoke for many when she wrote:

If the family knows the patient is brain dead, and I have to help keep them alive for less than a day, I have no problem taking care of the patient. If it takes longer and the family is getting strung out, forget it.

ICU Nurses' Experiences with Organ Donation

Thirteen items explored the ICU nurses' experiences with donors, recipients and organ donor educational activities. The numbers and percentages are represented in Table 6.

The initial item asked if the nurses had ever personally identified an organ donor. Fifty nine nurses responded yes while 51 stated no. If yes, the nurses were then asked how many times. The vast majority (N=52) responded 1 to 10 times. The range was 1 to 30 times with a mean of 3.84. The nurses were then asked if they had either been present or involved in a discussion with the family about donation. Sixty nurses answered affirmatively while 51 responded no. Of those responding yes, 54 stated they had been present or involved 1 to 10 times. The range was 1 to 40 times with a mean of 4.38.

The next item asked whether the nurses had ever been present for, or participated in the surgical removal of a donor's organs. The large majority had not (N=92) while 15 stated they had. Of those that had been present or participated in the removal of donor organs, 11 had done so 1 to 5 times. Three respondents who answered affirmatively, did not state how many times.

Table 6

Responses of ICU Nurses to Thirteen Items
Assessing Their Personal and Professional Experiences
With Potential Organ Donors and Potential Organ Recipients

Item	Inquiry	Classification	Responses	N=112
			<u>N</u>	Percent
4	Recognized Donor	Yes	59	52.7%
		No	51	45.5%
		No Response	2	1.8%
*4a	How Many Times	1 to 10 times	52	46.5%
		11 to 20 times	1	0.9%
		21 to 30 times	4	3.6%
		No Response	4	3.6%
		Not Applicable	51	45.5%
7	Discussed with Family	Yes	60	53.6%
		No	51	45.5%
		No Response	1	0.9%
*7a	How Many Times	1 to 10 times	54	48.4%
		11 to 40 times	3	2.7%
		No Response	3	2.7%
		Not Applicable	52	46.4%
8	Present For Organ Removal	No	92	82.1%
		Yes	15	13.4%
		No Response	5	4.5%
*8a	How Many	1 to 5 times	11	9.8%
		6 to 10 times	1	0.9%
		No Response	3	2.7%
		Not Applicable	97	87.0%
9	Know Any Dialysis Patients	No	84	75.0%
		Yes	25	22.3%
		No Response	3	2.7%
10	Personally Knew a Donor Patient	No	98	87.5%
		Yes	13	11.6%
		No Response	1	0.9%

Table 6 (continued)

Item	Inquiry	Classification	Responses	N=112
			<u>N</u>	Percent
15	See Organ Donation as Nursing Student	No	97	86.6%
		Yes	14	12.5%
		No Response	1	0.9%
16	In-serviced in Organ Donation	Yes	63	56.3%
		No	48	42.9%
		No Response	1	0.9%
*16a	How Long Ago (in months)	1 to 12 months	41	36.8%
		13 to 24 months	13	11.6%
		25 to 120 months	7	6.3%
		No Response	3	2.7%
		Not Applicable	48	42.9%
26	Experience with Kidney Recipients	No	56	50.0%
		Yes	53	47.3%
		No Response	3	2.7%
27	Experience with Dialysis Patients	Yes	97	86.6%
		No	13	11.6%
		No Response	2	1.8%

Note. Percentages may total more than 100 due to rounding to the nearest tenth.

(* Response requested if an affirmative response to the previous question.)

The next series of questions requested a yes-no response. The nurses were asked if they personally knew any dialysis patients. Most did not (N=84). They were then asked if they personally knew of anyone who had become an organ donor. Ninety eight responded no, while 13 had known an organ donor. Next, the participants were asked if they had seen organ donation as a nursing student. Again, the majority responded no (N=97). Sixty three respondents answered yes to the next question that asked if they had received in-service training on organ donation. Those who answered yes were then asked how long ago this had occurred. The responses ranged from 1 to 120 months. The majority had attended within the last 12 months (N=41). The mean was 17.6 months.

The next question inquired if the nurses had any experience caring for kidney recipients. Fifty three of the respondents had nursed these patients while 56 had not. Finally, the nurses were asked if they had experience with dialysis patients. A great majority (N=97) had dialysis experience while 13 respondents had no dialysis experience.

Attitudes of ICU Nurses Toward Organ Donation

The numbers and percentages represented in Table 7 measured the ICU nurses' attitudes toward organ donation. The questionnaire contained four items that explored this area. The first question asked directly if the nurses approved, were neutral, disapproved, or did not know how they felt about organ donation. The great majority approved of donation (N=93) with only nine disapproving and six respondents indicating they were neutral on the subject. The next question asked in an open-ended format why they felt this way. Ninety two subjects

Table 7
Responses of ICU Nurses to Four Items Assessing
Their Attitudes Toward Organ Donation

Item	Inquiry	Classification	Responses	N=112
			<u>N</u>	Percent
13	Do You	Approve	93	83.0%
		Don't Know	9	8.0%
		Neither	6	5.4%
		Disapprove	2	1.8%
		No Response	2	1.8%
*14	Why Do You Feel That Way	Sound Ecologic Value	42	**45.6%
		Benefit to Recipient	40	**43.5%
		Benefit to Donor Family	11	**12.0%
		Ambivalent Response	5	**5.4%
		Against Religion	4	**4.3%
		Hard on Donor Family	1	**1.1%
		No Response	20	21.7%
17	Want to be a Donor	Yes	84	75.0%
		No	16	14.3%
		No Response	12	10.7%
18	Carry a Donor Card	Yes	61	54.5%
		No	48	42.9%
		No Response	3	2.7%

Note. Percentages may total to more than 100 due to rounding to the nearest tenth.

(* Open-ended question.)

(** Based on 92 respondents. Percentage total to more than 100 due to multiple reasons given in some responses.)

chose to respond. Multiple reasons were given in many replies, but most cited the ecologic benefits of donation (N=42). Ecologic was defined by this investigator to refer to those responses that cited the recycling of organs that would otherwise be wasted. One nurse stated very eloquently:

Donating one's organs emanates from a person's love for life and other people. It is one of the few things that money can't buy - It would be a wonderful feeling to know that "my body part" has been instrumental in prolonging somebody else's life.

Another nurse was more practical in her response:

The dead person won't be needing his organs where he is going next. If they [the organs] are good, why not let someone else who needs them have them and live on to make a contribution?

Still another nurse maintained a more historical perspective toward donation:

I remember when blood transfusions were being debated like organ transplants are now - and look at the lives saved due to blood - whatever it takes to put a healthy, functioning person back in production, I'm for it...

The second most frequently cited reason for the nurses' approval was the benefit to be had by the recipient (N=40). Many nurses cited the visible improvement in the quality of life they saw occur when they had the opportunity to meet a recipient. One nurse stated:

I approve of organ donation because all I have to do is think of the people I have met who have been recipients of tissue and organ

donors and what it has meant to them and I know in my heart that donation is truly a gift.

Eleven nurses commented on the benefit that was reaped by the donor family. One nurse commented:

I think for the family who loses a loved one, being able to donate the person's organs is at least one thing that can help with the grief - knowing that their loss has given someone else a chance for a better quality life.

Religious beliefs were cited by some as the source of their disapproval of donation. One nurse spoke for four respondents when she wrote:

Clinically, I know organ donation has helped and will help many people to live longer and the nurse says this is great.

Religiously, I have trouble dealing with this - I feel what God put in your body should stay there.

The next question that explored the nurses' attitudes asked if they would personally want to be a donor. Eighty four nurses responded affirmatively, while 16 indicated no. Finally, the nurses were asked if they carried a donor card. Sixty one indicated that they did, while 48 did not.

Contrasting of Results With Sophie Study

The second research question of this study concerned the contrasting of results obtained by this investigator with those reported by Sophie et al. (1983). The following sections contrast the ICU nurses' responses in these areas: (a) perceptions of key individuals in the organ donor process, (b) knowledge levels about

organ donor criteria, (c) perceived attitudes of their neurosurgeons and neurologists and hospital policies, (d) reactions to caring for brain-dead patients, and (e) personal attitudes toward organ donation.

Results of ICU Nurses' Perceptions of Key Individuals

Contrasted With Sophie Study

The results of four items that explored the ICU nurses' perceptions of key individuals in the donor process are contrasted with the results obtained by Sophie et al. (1983) in Table 8. The first item looked at who initially recognized a potential donor. Both studies found the staff nurse most frequently identified donor patients with this investigator reporting 72% and Sophie et al. reporting 63%. This investigator found that all physicians involved in the potential donors care only identified the donor patients 14% of the time while Sophie et al. found the physician identifying donor patients 31% of the time (p. 263).

The second item asked who made the actual decision to contact the organ transplant agency. This study found that the MD most frequently made this decision (51%) as did Sophie et al. (1983) who reported a finding of 65%. Staff nurses were the next most frequent callers to the transplant agency, with this investigator reporting 27% and Sophie et al. reporting 17% (p. 263).

The third item inquired about who actually placed the call to the donor agency. This study found that the staff nurse had this responsibility 56% of the time, while Sophie et al. (1983) reported the staff nurse placed the call 72% of the time. Both studies found the

Table 8
 Contrasted Results by Percentages of
 ICU Nurses' Perceptions of
 Key Individuals in the Organ Donor Process

S.O.T.Q Item 1: Who is First to Recognize a Potential Donor		
Initiator	Groups	
	*A	**B
ICU/ER Nurses	72%	63%
MD	14%	31%
Family	1%	5%

S.O.T.Q Item 2: Who Decides to Call Organ Recovery Program		
Initiator	A	B
MD	51%	65%
ICU/ER Nurses	27%	17%
Family	7%	15%

Table 8 (continued)

S.O.T.Q. Item 3: Who Actually Calls the Organ Recovery Program		
Initiator	A	B
ICU/ER Nurses	56%	72%
MD	12%	25%
S.O.T.Q. Item 6: Who Approaches Family About Donation		
Initiator	A	B
ICU/ER Nurses	48%	17%
MD	41%	79%
Chaplain	0%	3%

(* Represents the results of this study. Percentage shown for ICU/ER Nurses are a combined total from Table 2. MD results represent combined percentages of neurosurgeon, attending physician, ICU physician and ER physician shown on Table 2. These percentages are then rounded off to the nearest whole number)

[** Represents the results reported by Sophie et al. (1983)]

physicians were the second most frequent callers with this study reporting 12% and Sophie et al. reporting 25% (p. 263).

The fourth item asked who initially approached the family about the possibility of organ donation. This investigator found that the staff nurse had this responsibility 48% of the time while Sophie et al. (1983) found the staff nurse spoke with the family only 17% of the time. While this investigator found that the physician spoke with the family 41% of the time about donation initially, Sophie et al. reported the physician had this responsibility 79% of the time (p. 263).

Results of ICU Nurses' Knowledge of Donor Criteria

Contrasted with Sophie Study

The results of four vignettes that were used to assess the ICU nurses' knowledge of donor criteria are contrasted with the results obtained by Sophie et al. (1983) in Table 9. The nurses were asked to decide whether they should call or not call the organ transplant agency based on the information given in each vignette. The correct response in three of the vignettes was to call while the final vignette concerned a patient who was dead on arrival at the hospital, negating the chance for organ procurement and the need to call the agency.

The first vignette concerned a patient who sustained a head injury, demonstrating a clear case for donation. This study found that 79.1% of the nurses correctly identified the need to call the transplant agency. Sophie et al. (1983) reported that 70.3% of the nurses chose to call the agency (p. 263).

Table 9
 Contrasted Results by Percentages of ICU
 Nurses' Knowledge of Organ Donor Criteria

Vignette	***Variable	Groups	
		*A	**B
Head Injury	Call	79.5%	70.3%
Subarachnoid Hemorrhage	Call	42.9%	20.7%
Viral Encephalitis	Call	72.3%	67.1%
Dead on Arrival	Not Call	44.6%	65.8%

(* Represents the results of this study. Percentages shown are from Table 3.)

[** Represents the results reported by Sophie et al. (1983)]

[*** Variables noted are the correct responses to each vignette and represent the data presented by Sophie et al. (1983)]

The second vignette described a patient who had suffered a subarachnoid hemorrhage and who had a history of diabetes and hypertension. This study found that 42.9% of the nurses correctly identified the need to call the transplant agency to assess this complicated case while Sophie et al. (1983) reported that 20.7% chose to call the agency (p. 263).

The third vignette involved a young female who had a possible infectious process that was later ruled out and who fit all other criteria for brain death. This study found that 72.3% of the nurses correctly identified the need to call the transplant agency while Sophie et al. (1983) reported a finding of 67.1% (p. 263).

The fourth vignette concerned a patient who arrived at the hospital deceased. For this reason, a call to the transplant agency was not needed for organ procurement. Forty four percent of the nurses in this study felt that a call was not needed. Sophie et al. (1983) found 65.8% of the nurses did not feel a call was warranted (p. 264).

Results of ICU Nurses' Perceptions of the Attitudes
of Their Neurosurgeons, Neurologists and Hospital Policies
Contrasted With Sophie Study

The results of two items that explored the nurses' perceived attitudes of their neurologists, neurosurgeons and hospital policies are contrasted with those results reported by Sophie et al. (1983) in Table 10. The nurses were asked if they perceived the attitudes to be one of approval, disapproval, neutrality, or if they did not know.

Table 10

Contrasted Results by Percentages of
ICU Nurses' Perceptions of the Attitudes of Their Neurosurgeons,
Neurologists and Hospital Policies Toward Organ Donation

Subject	Perceptions	Groups	
		*A	**B
Neurosurgeons/ Neurologists	Approve	52.7%	41.8%
	Don't Know	36.6%	48.8%
	Neutral	8.9%	6.1%
	Disapprove	0.0%	3.0%
Hospital Policy	Approve	82.1%	64.0%
	Don't Know	15.2%	25.1%
	Neutral	1.8%	20.0%
	Disapprove	0.0%	0.6%

(* Represents the results of this study. Percentages shown are from Table 4.)

[** Represents the results reported by Sophie et al. (1983)]

This study found that 52.7% of the nurses felt that their neurosurgeons and neurologists approved of organ donation while 36.6% of the nurses did not know how these physicians felt. Sophie et al. (1983) found that 41.8% of the nurses felt those physicians approved while 48.8% of the nurses did not know how these physicians felt about organ donation (p. 264).

This study revealed that 82.1% of the nurses felt that their hospital policies about organ donation approved of the concept while 15.2% did not know what their hospital policies were. Sophie et al. (1983) found that 64% of the nurses in their study felt that their policies approved of donation while 25% did not know what their policies said (p. 264).

Results of ICU Nurses' Reactions to Caring for
a Brain-Dead Patient Contrasted With Sophie Study

The results of one open-ended question contrasting the nurses' reactions to caring for a brain-dead patient to those results found by Sophie et al. (1983) are shown in Table 11. These results were analyzed for consistent themes and then tabulated.

This study found that 41% of the nurses were not bothered by donor care, while Sophie et al. (1983) found 32% of the nurses were not bothered (p. 264). While 24% of the nurses in this study thought the care was worthwhile because of the benefit to others, Sophie et al. reported a very comparable 25% (p. 265). Similar findings were seen again when this study found 20% of the nurses expressing ambivalence or stating that the experience was emotionally draining. This was in

Table 11

Contrasted Results by Percentages of
ICU Nurses' Reaction to Participating
in the Care of a Brain-Dead Patient

Reaction	Groups	
	*A	**B
Does Not Bother Me	41%	32%
Worthwhile Because It Helps Another	24%	25%
Emotionally Draining/ Ambivalent Reactions	20%	21%
Subjects Family to Added Stress	4%	12%
Particularly Difficult When Donor is Young	0%	5%

(* Represents the results of this study. Percentages shown are from Table 5 and are rounded of to the nearest whole number.)

[** Represents the results reported by Sophie et al. (1983)]

contrast to 21% reported by Sophie et al (1983). Sophie et al. reported that 12% of their respondents stated that donor care subjected the family to added stress (pp. 264-265), while this study found only 4% responding in kind. Finally, while Sophie et al. reported that 5% of their respondents found donor maintenance particularly difficult when the donor was young (p. 265), no nurses made that statement in this study.

Results of ICU Nurses' Attitudes Toward
Organ Donation Contrasted With Sophie Study

The results of four items contrasting the ICU nurses' personal attitudes toward organ donation with those results reported by Sophie et al. (1983) are shown in Table 12. The nurses were asked if they approved, disapproved, were neutral, or did not know how they felt about organ donation. They were then asked in an open-ended format why they felt that way. Then, they were asked if they wanted to be an organ donor and if they carried a donor card on their drivers' licenses indicating this.

This study found that the great majority of nurses (83%) approved of organ donation, as did Sophie et al. (1983) who reported an even greater margin of 86.6% (p. 264). While this study found the greatest reason for this approval to be because of the ecologic benefit (45.6%), Sophie et al. reported only 16.4% of the respondents gave this reason. Conversely, 76.7% of the respondents in the study by Sophie et al. stated that the benefit reaped by the recipient to be the primary reason for approval (p. 264). This study found only 43.5% reporting

Table 12
Contrasted Results by Percentages of
ICU Nurses' Attitudes Toward Organ Donation

Item	Inquiry	Classification	Groups	
			*A	**B
13	Do You	Approve	83.0%	86.8%
		Don't Know	8.0%	5.5%
		Neither	5.4%	6.8%
		Disapprove	1.8%	0.6%
***14	Why Do You Feel That Way	Sound Ecologic Value	45.6%	16.4%
		Benefit to Recipient	43.5%	76.7%
		Benefit to Donor Family	12.0%	****
		Ambivalent	5.4%	****
		Against Religion	4.3%	****
		Hard on Donor Family	1.1%	****
		Reservations About Brain Death	****	6.0%
17	Want to be a Donor	Yes	75.0%	80.7%
18	Carry a Donor Card	Yes	54.5%	28.2%

(* Represents the results of this study. Percentages shown are from Table 7.)

[** Represents the results reported by Sophie et al. (1983)]

(*** Open-ended question)

(**** No similar responses noted)

this reason. This study found reasons given for disapproval included religion, suffering incurred by the donor family and ambivalence. Sophie et al. stated only that some respondents had reservations about the concept of brain death (p. 264).

When asked if the respondents personally would want to be a donor, this study found that 75.0% agreed. Sophie et al. (1983) reported an even greater margin of 80.7% (p. 264). However, when asked if they carried a donor card indicating such, this study found that 54.5% of the respondents carried a card while only 28.2% of the participants in the study by Sophie et al. did so (p. 264).

Summary

The findings in this study showed that the ICU staff nurse played a critical role in the identification of the potential organ donor by recognizing the donor 68.8% of the time. However, when the decision needed to be made to call the organ procurement agency, this was done primarily by the physician (51%). This figure represents a difference from the results reported by Sophie et al. (1983) who found that the physician made the decision to call 65% of the time (p. 263). This study found that nurses assumed a more active role in this process by making the decision to call 27% of the time versus 17% reported by Sophie et al. (p. 262).

Another notable difference was seen in the area of who approaches the family about donation. This study found that the staff nurse approached the family 48.2% of the time. Sophie et al. (1983) reported that the physician performed this task 79% of the time while the

staff nurse was reported at only 17% (p. 263). These findings suggest that nurses may be assuming a greater role in the organ donor process.

Knowledge levels showed only a moderate difference despite the fact that 56.3% of the nurses had attended in-service classes on donation. In fact, fewer nurses correctly identified the need to call the procurement agency in this study with the patient who arrived dead at the hospital (44.6%) than was found by Sophie et al. (1983) who reported 65.8% (p. 263).

A moderate difference was seen in the nurses' perceptions of the attitudes of their neurosurgeons, neurologists and hospital policies. This study found that 52.7% of these physicians were felt to approve of donation versus 41.8% reported by Sophie et al. (1983, p. 263). An even greater difference was seen in the nurses' perceptions of their hospital policies. This study found that 82.1% of the nurses felt their policies were one of approval, while Sophie et al. reported 64% (p. 263).

A moderate difference was also seen in the nurses' reactions to donor maintenance. While this study found that 65% of the nurses felt that donor maintenance was worthwhile or did not bother them, Sophie et al. reported 57% (p. 264). An inverse result was obtained in negative reactions. This study found that 24% of nurses found that donor care was emotionally draining, were ambivalent or felt that it caused greater stress to the family while Sophie et al. reported 38% (p. 264).

In exploring the nurses' personal attitudes toward donation, it is interesting to note that this study found that a lower percentage of nurses agreed with organ donation (83%) as compared to Sophie et al. (1983) who reported 86.8% (p. 264). This finding was unexpected in light of the recent legislation encouraging involvement in the donor process, increased educational efforts in the medical profession and the extensive media coverage of successful organ transplantations. While this study found that religious concerns were seen as a factor by a small percentage of nurses (4.5%), this was not noted by Sophie et al.

A smaller number of nurses expressed a desire to become donors (75%) in this study than was found by Sophie et al. (1983) who reported a finding of 80.7% (p. 264). It is interesting to note however, that 54.5% of those that approved of donation carried a donor card while Sophie et al. stated that only 28.2% of their respondents carried a card (p. 264).

Chapter 5

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Organ procurement has been cited as the weak link in the transplantation process (Bart, Macon, Whittier, Baldwin, & Blount, 1981, p. 379). Due to inadequate procurement, an acute shortage of organs exists, resulting in the loss of life for some patients and a decreased quality of life for others (Task Force on Organ Transplantation, 1986, p. 27). The failure to procure adequate numbers of organs is the result of a failure of health professionals to identify the donors and to contact the procurement agencies (Bart et al., p. 381).

The identification of a potential organ donor is a highly cognitive and perceptual process that occurs in stressful circumstances. To implement this process, all health professionals who come in contact with potential donors in their facilities need education and collegial support. They also need the support of the community to encourage the process.

Despite the differences between the sample in the study by Sophie et al. (1983) and this study in relation to geographic location, it was expected that a greater knowledge and approval level of organ donation would be seen. Greater levels of knowledge and approval were expected due to the passage of federal organ donor legislation and the increased coverage in the professional and lay literature about organ donation that occurred between the two studies. This was not conclusively found.

This investigation revealed that an uncertainty still existed about how the nurses perceived that their hospital and nursing administrators (as reflected by their policy statements) felt about organ donation. This investigator found that 15.2% of the nurses did not know what their hospital policies said about donation. This was a lower percentage than the finding of 25% reported by Sophie et al. (1983), and was significant in light of the recent donor legislation. It seemed that all nurses would be aware of their policies because this legislation required all hospitals to promote donation by outlining how personnel would approach the family and contact the procurement agency, if the patient met the criteria for brain death. It could be speculated that some hospitals have fulfilled the letter of the law by developing the required policy on donation, but have not educated their personnel about its existence or intent.

If the nurses' perceptions about their physicians' attitudes were correct, it would appear that some physicians remained ambiguous about their overall willingness to become involved in the procurement process. This study found that nurses perceived themselves as more involved than physicians in donor identification than was found by Sophie et al. (1983). While this investigator found that the physician identified potential donors 14% of the time, Sophie et al. reported 31% (p. 262). Also, while this study found that physicians continued to be the primary decision makers about contacting the procurement agencies, their role in this decision making process was now more frequently shared or assumed by nursing personnel. The physician was found to

make the decision to call the procurement agency only 51% of the time, as compared to 65% reported by Sophie et al. (p. 262).

It was also found that 36.6% of the nurses did not know how their neurosurgeons and neurologists felt about donation. This was combined with only a modest difference in the number of physicians who were perceived as approving donation (52.7% versus 41.8% reported by Sophie et al., 1983, p. 263).

This perceived lack of support from the physicians and administration could be viewed as a critical weakness in the procurement system perhaps because, as pointed out by Freedman et al. (1970), attitudes are influenced by association, reinforcement and imitation (p. 252). If the nurses do not feel supported in the procurement process by either the physicians or administration, they may be reluctant to become involved.

In light of the uncertainty perceived by the nurses about their physicians and hospital policies, it may not be surprising that a lower percentage of nurses in this study approved of the donor process than reported by Sophie et al. (1983). While Sophie et al. reported that 86.8% of the nurses approved of donation and that 80.7% wanted to be donors in the event of their death (p. 264), this study found that only 83% of the nurses approved of donation and that 75% desired to become donors.

It could be speculated that the decreased level of approval toward donation felt by the nurses was the result of a lack of support felt from some physicians or an uncertainty about their hospital policies

Combined with an increased public interest, these issues might have caused some nurses to more closely examine and alter their beliefs. Also, religious concerns were mentioned by some, an issue not seen in the study by Sophie et al. (1983).

The conclusion that nurses were more closely examining and following their beliefs was supported by the finding that many more nurses that did agree with the concept of donation seemed to have made a commitment by carrying donor cards on their drivers' licenses. While Sophie et al. (1983) found that only 28.2% of the nurses who approved of donation carried donor cards (p. 264), this investigator found that 54.5% of the nurses carried a donor card. This finding suggests that there is less discrepancy between the nurses' beliefs and actions in this study than was reported by Sophie et al.

In spite of the slightly lower percentage of nurses who approved of donation, it was found that the nurses were more involved in the organ procurement process than was reported by Sophie et al. (1983). This was reflected by a higher percentage of nurses who: (a) identified donors (72%), (b) decided to call the procurement agency (27%), and (c) approached families about donation (48%). Sophie et al. reported that: (a) 63% of the nurses identified donors, (b) 17% of the nurses decided to call the procurement agency, and (c) only 17% of the nurses approached the family about donation (p. 262).

Another interesting finding was seen in the higher number of nurses who stated that donor care was worthwhile, or that it did not bother them. This investigator found that 65% of the respondents felt

that donor care was worthwhile or that it did not bother them, in contrast to Sophie et al. (1983) who reported 57% (p. 264). When examined in the light of the smaller percentage of nurses who approved of donation, it seemed that nurses were willing to care for these patients but might not want the same for themselves. It could also be proposed that some nurses may have assumed a depersonalized attitude to protect themselves against any ambivalence they may have experienced caring for donor patients and their families. Quint (cited in Sophie et al.) observed that ICU nurses were usually committed to a fight for life. Lippincott (cited in Sophie et al.) then followed with the observation that brain death and termination of life support equipment was a significant source of stress for ICU nurses (p. 262).

It was apparent that donor care continued to be a source of stress for many nurses. Even as a larger percentage of nurses found donor care worthwhile, or stated that it did not bother them, this study found that 20% of the nurses found donor care emotionally draining or were ambivalent. This was essentially the same as reported by Sophie et al. (1983) who reported 21% (p. 264). Obviously, many nurses have still not found a source of satisfaction in caring for the organ donor patient.

Another source of discomfort may be an inadequate knowledge level about donor criteria. Despite the fact that more than half the nurses in this study had attended classes about donation, some misconceptions persisted. The nurses demonstrated only a moderate difference in their knowledge levels from the study by Sophie et al. (1983), as noted from

the vignettes about donor identification. One of the reasons for this might have been a result of the wording used in the questionnaire, particularly with the vignette about the patient who was dead on arrival at the hospital. Many nurses indicated on their questionnaires that they would call the agency for procurement of tissues, an option available even if the patient no longer had a beating heart. This option may have contributed to a false increase in the number of nurses who incorrectly decided to call the procurement agency.

Other factors that could have accounted for the differences in findings between the two studies were the size of the sample population in this study. A larger sample might have altered the findings in this study. Another variable was the different geographical location of this study. While Sophie et al. (1983) conducted their study in the Illinois-Indiana region, this study was carried out in the San Francisco (California) bay area at a different time. The different location might have elicited some regional differences that were not identified.

The design of the questionnaire created some unanticipated difficulties in data interpretation. As was seen in the example above, many nurses were unclear whether the vignettes were asking only about organ donation, or whether the nurse should call if a potential tissue donor became available. Tissue donation has gained increased application since the development of this questionnaire.

A design weakness was seen in some questions that asked about experience with kidney transplant patients and dialysis patients.

Since the development of this questionnaire, many other types of organ transplants have become routine. Therefore, the questions should have been redeveloped to include experience with these types of patients. In the question about the nurses' educational level, difficulty was encountered because not all nurses had a degree, particularly the vocational nurses. As no option for "none" was provided, this required that those that wrote in "none" be included in the category indicating "no response." The question about job title did not include an option for "charge nurse" or "educator." These persons were included in the "assistant supervisor" category.

The question about religion did not include an option for "none." When subjects wrote this in, they were included in the category for "other." In the questions on whether the nurses' hospitals were designated trauma centers, or if their county has a trauma system, there was no option provided for "unknown." When this was written in, this response was included in the "no response" category.

Additional problems were encountered when attempts were made to compare the data obtained in this study to that reported by Sophie et al. (1983). When this researcher attempted to obtain the original data, it was found that Sophie, the primary researcher was outside of the United States with the military and was unavailable. This investigator was able to contact three of the other authors involved in the study, but none had the original data. Consequently, this investigator used the article by Sophie et al. as the sole source of data. Some problems created by this process were that all data

reported in the article were given in percentages. No sample numbers were reported. This eliminated the opportunity to statistically compare the data in both studies.

Other problems encountered were some uncertainty about the reporting of the data in the article by Sophie et al. (1983). It was not always clear what the sources of their figures were. One example was whether Sophie et al. included the supervisory nurses when reporting on the nurses' perceptions of key individuals in the donor process. This investigator concluded that they were not included in the data reported, but this conclusion could be in error.

Another area reported by Sophie et al. (1983) that was unclear was the nurses' responses to the vignettes investigating the knowledge levels of the nurses. It was not clear whether the percentages reported in the article were those responses indicating that the nurses would call or not call the procurement agencies. This investigator concluded that the percentages reported were those responses that were the correct responses, meaning the nurses would call in all cases except in the vignette where the patient was dead on arrival. In this case, the percentage reported by Sophie et al. indicated the number of nurses that would not call. Again, this investigator may have incorrectly arrived at this conclusion.

The tabulation of the open-ended questions by Sophie et al. (1983) was ambiguous. Some representative responses presented in the article by Sophie et al. seemed to apply to more than one category of similar responses. It was not clear how the judges who tabulated the data

chose which category to place each response in, particularly if a participant responded with multiple reasons. This author chose to place a response that corresponded to more than one response category in more than a single category. This may have created some inaccuracies in the comparison of the data.

Finally, the article by Sophie et al. (1983) excluded the data on the experiences of the nurses. Therefore, this investigator could not compare the two populations' experience characteristics.

Recommendations

The following recommendations are based on the study results, literature review and conceptual framework:

1. Nurses need to continue to be educated and updated in the area of organ donation. This education should include coverage of recent legislative changes, the concept of brain death and donor identification, and team concept. They also need to be trained in techniques for supporting families and each other. As part of this, the nursing staff needs to be made aware of the comfort that can be derived by the family when donation is provided as an option for an otherwise hopeless situation.

2. Physicians need to be increasingly targeted for educational offerings about donation. As physicians continue to be the primary decision makers in directing the care for their patients, they need to be made more aware of their responsibilities in the area of donation. This might include: (a) increased knowledge about the concept of brain

death and donor identification, (b) liability concepts, (c) comfort derived from donation by the family, (d) techniques for supporting the family, and (e) the importance of a team concept in caring for the donor and his family. This team must also include the transplant coordinator who is available 24 hours per day for consultation.

3. Nursing supervisory personnel and hospital administrators might take a more active role in the development of their staff in the areas of team development and support, and in educating their personnel about the existence and intent of their policies pertaining to organ donation. This team concept might best be facilitated on an on-going basis by the utilization of a designated ICU organ donor liaison. As Overcast et al. (1984) observed, when a nurse liaison is utilized, almost every potential organ donor is identified and the family is approached for donation (p. 1561). A liaison might help facilitate support by: (a) providing a knowledge resource, (b) acting as a resource for supporting families, (c) interfacing with the procurement agencies and (d) conducting case studies to review patient care problems and provide a forum for verbalizing potential staff discomfort. This liaison could be a staff nurse who expresses an interest in donation. A training program might be developed for the liaisons at a local organ procurement agency. Supervisory personnel also need to support the involvement of the physicians in this team role, by encouraging increased communication between nurses, administration and physicians.

4. The media might continue to promote an awareness of organ donation, thereby encouraging establishment of positive conceptual traces about donation in the community. The establishment of positive conceptual traces would support hospital personnel engaged in the care of donor patients and the families confronted with the decision of whether or not to donate their loved ones' organs.

5. The study should be replicated with a larger sample. A larger sample would increase the amount of data obtained and decrease skew in the data created by a limited sample size.

6. The instrument should be revised before the study is repeated. This revision could take the form of analyzing certain problem items and perhaps modifying them. Also, some items might need to be updated to reflect recent changes in the field of transplantation.

7. Directions for future research could investigate techniques to increase physician involvement. Also, methods need to be investigated for encouraging collegial support, increasing a sense of satisfaction, and decreasing ambivalence and discomfort in donor care.

Concluding Statement

Health professionals are the crucial link that activates the procurement process. They identify potential donors, control access to these donors, and must take responsibility for dealing with the families. Intensive Care Units are high tension areas designed for the performance of heroic deeds to save lives. Brain death and organ

procurement can be seen as a failure of the system. The sense of failure may be particularly acute for the physician who is seen as the key decision maker but who was unsuccessful in saving the patient's life. There may also be a fear of liability if he or she is uncomfortable with the concept of brain death. The result of these fears may be the lack of clear communication to the nursing staff about how he or she feels about the concept of organ donation. Increased education might best be targeted at this group as well as encouraging a team concept among the physicians, nurses and hospital administrators..

Perhaps health professionals require increased support from the community and other team members for the emotional difficulties that can result from caring for a donor patient and his family. Until all those involved in organ donation can establish the cultural traces needed to form a positive, unified concept of the process that is supported by the community, the organ shortage will continue.

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APPENDIX A
Consent Letters
From Facilities

June 1, 1988

Nancy Page
2375 Laura Lane
Mountain View, CA 94043

Dear Ms. Page:

This letter will confirm our willingness to allow you to administer your survey to our ICU South Staff Nurses who agree to participate in your survey.

Please arrange for questionnaire distribution with Jan Nielsen, RN, Manager, ICU South. She can be reached at 992-4000, extension 2010.

Thank you.

Sincerely,

Judy Cook

Judy Cook
Director of Nursing Services

JC:ct

EDEN HOSPITAL MEDICAL CENTER
20103 LAKE CHABOT ROAD
CASTRO VALLEY
CALIFORNIA 94546-5367
415 537-1234

92

Nancy Page
2375 Laura Lane
Mountain View, Ca. 94043

June 1, 1988

Dear Nancy,

Eden Hospital Medical Center is enthusiastic about supporting your research project by offering our facility for data collection. We see three to four opportunities for organ and tissue donation per month, and our Intensive Care Unit is particularly active in the donation process.

I would like to invite you to work directly with our Critical Care Clinical Specialist, Nancy Bell, RN, MN, CCRN, CEN or ICU Clinical Coordinator, Lynn Malcolm, RN, CCRN.

Sincerely,

Margaret Green
Vice President, Patient Care Services

**SAN JOSE
MEDICAL
CENTER**

675 East Santa Clara Street
San Jose, CA 95112
(408) 998-3212

May 25, 1988

Nancy Page, R.N., B.S.N.
2375 Laura Lane
Mountain View, CA 94043

Dear Ms. Page:

I would appreciate participating in your study. You have permission to administer your survey to the nurses of Critical Care at San Jose Medical Center.

I would also appreciate a summary of the data obtained, both study-wide and of San Jose Medical Center.

Please coordinate the administering of the survey through me.

Sincerely yours,

Jim Watson, R.N., M.S.
Director of Critical Care
Services

JW/bbp
WT525.2

An Affiliate Of

**HEALTH
DIMENSIONS**
INCORPORATED

THE GOOD SAMARITAN HOSPITAL
OF SANTA CLARA VALLEY
SAN JOSE MEDICAL CENTER
WHEELER HOSPITAL
SOUTH VALLEY HOSPITAL (1989)
HEALTH ADVANTAGE
HEALTH ADVANTAGE VENTURES

Kaiser Permanente Medical Center
1200 El Camino Real
South San Francisco, Ca 94080-3299
(415) 742-2000

Joseph L. Meresman
Administrator

Dwight W. Fitterer, M.D.
Physician-in-Chief

94

May 9, 1988

To Whom It May Concern:

I give Nancy Page, R.N., B.S.N. permission to administer a survey to the nurses in the intensive care unit at Kaiser South San Francisco. This survey concerns ICU nurses' attitudes toward organ donation. I understand that that this study meets the standards of the Human Subject Committee at San Jose State University and therefore, the confidentiality of all participants will be maintained.

I understand that I may contact Nancy Page at (415) 964-5287 or her graduate advisor, Sharon Hogan at San Jose State University at (408) 924-3152 with any questions or concerns. I also understand that I may receive a copy of the results when they are available and that I may share them with the participating staff.

Sincerely,

Ann Cardosi, R.N.
Director of Nursing

ALEXIAN BROTHERS
Hospital

95

May 12, 1988

Human Subjects
Review Board
San Jose State University
1 Washington Square
San Jose, California 95192

Gentlemen:

This is to inform you that Alexian Brothers Hospital would be pleased to participate in the research study entitled "Attitudes of Intensive Care Towards Organ Donation."

If you have any further questions, please feel free to call. Thank you.

Sincerely,

Lee Anne Durkin, RN, MS
Vice President, Nursing Service

LAD/dlm

I give Nancy Page, R.N., B.S.N. permission to administer a survey to the nurses in the intensive care unit at Kaiser Permanente Medical Center in Redwood City. This survey concerns nurses' attitudes toward organ donation. I understand that this study will meet the standards of the Human Subjects Review Board at San Jose State University and the confidentiality of all participants will be maintained.

I understand that I may contact Nancy Page at (415) 964-5287 or her graduate advisor, Sharon Hogan at (408) 924-3134 with any questions or concerns. I also understand that I may receive a copy of the results when it is available and that I may share them with the participating staff.

Helen Hanson, R.N.
Director of Nursing

date

I give Nancy Page, R.N., B.S.N. permission to administer a survey to the nurses in the intensive care unit at Valley Memorial Hospital in Livermore, CA. This survey concerns nurses' attitudes toward organ donation. I understand that this study will meet the standards of the Human Subjects Review Board at San Jose State University and the confidentiality of all participants will be maintained.

I understand that I may contact Nancy Page at (415) 964-5287 or her graduate advisor, Sharon Hogan at (408) 924-3134 with any questions or concerns. I also understand that I may receive a copy of the results when it is available and that I may share them with the participating staff.

Marcy Feit, R.N.
Clinical Nursing Director

date

April 28, 1988

Nancy Page, R.N., B.S.N.
2375 Laura Lane
Mountain View, CA 94043

Dear Nancy,

In considering your request, NorthBay Hospital Group dba VacaValley Hospital, at 1000 Nut Tree Road, Vacaville, CA 95688, and NorthBay Medical Center at 1800 Pennsylvania Avenue, Fairfield, CA 94533, gives you permission to administer a survey to support your Masters of Science in Nursing investigative efforts of intensive care nurses' attitudes toward organ donation.

We would appreciate being provided data obtained from this study upon completion. If there's anything else I can do, please call me at (707) 446-5713.

Sincerely,

ren:06c

For S. Garland / ren

Susan Garland
Assistant Administrator for
Nursing Services

I give Nancy Page, R.N., B.S.N. permission to administer a survey to the nurses in the intensive care unit at Alta Bates Hospital in Berkeley CA. This survey concerns nurses' attitudes toward organ donation. I understand that this study will meet the standards of the Human Subjects Review Board at San Jose State University and the confidentiality of all participants will be maintained.

I understand that I may contact Nancy Page at (415) 964-5287 or her graduate advisor, Sharon Hogan at (408) 924-3134 with any questions or concerns. I also understand that I may receive a copy of the results when it is available and that I may share them with the participating staff.

Sandra Hesterly R.N.M.S.
Sandy Hesterly, R.N.
Associate Director of Nursing Service

5/20/88
date

Mills Hospital
100 South San Mateo Dr
San Mateo, CA 94401
415-696-4400

Peninsula Hospital
1783 E. Camino Real
Burlingame, CA 94010
415-696-8400

100

June 6, 1988

Nancy Page
2375 Laura Lane
Mountain View, CA 94043

Dear Ms. Page:

I am pleased to write to you of the Nursing Research Committee's decision in favor of your conducting the study, Attitudes of Intensive Care Nurses toward Organ Donation, at Mills and Peninsula Hospitals.

The committee requires the following: (a) that you not identify the data you obtain as that obtained at Mills Hospital, Peninsula Hospital, or Mills-Peninsula Hospitals; (b) that the nurses who participate remain anonymous; (c) that the nurses participate voluntarily; (d) that the nurses complete the questionnaire on off-duty time; (e) that the nurse managers of the Intensive Care Units (ICUs) at Mills Hospital and at Peninsula Hospital give their approval for you to include in the study the nurses on their respective units; (f) that you consult the nurse managers of the Mills and Peninsula Hospitals' ICUs regarding distribution and other specific procedures involved in questionnaire administration, and they approve the procedures discussed; and (g) that you provide annual reports and, on completion of the study, the results of the research to the committee.

I wish you every success conducting the study. If I, or the Nursing Research Committee, can be of any further assistance to you, please do not hesitate to contact me.

Sincerely,

Sandra Ruhl, RN
Nursing Research Committee Chairperson

slr

Kaiser Permanente Medical Center
1200 El Camino Real
South San Francisco, Ca 94080-3299
(415) 742-2000

Joseph L. Meresman
Administrator

Dwight W. Fitterer, M.D.
Physician-in-Chief

94

May 9, 1988

To Whom It May Concern:

I give Nancy Page, R.N., B.S.N. permission to administer a survey to the nurses in the intensive care unit at Kaiser South San Francisco. This survey concerns ICU nurses' attitudes toward organ donation. I understand that that this study meets the standards of the Human Subject Committee at San Jose State University and therefore, the confidentiality of all participants will be maintained.

I understand that I may contact Nancy Page at (415) 964-5287 or her graduate advisor, Sharon Hogan at San Jose State University at (408) 924-3152 with any questions or concerns. I also understand that I may receive a copy of the results when they are available and that I may share them with the participating staff.

Sincerely,

Ann Cardosi, R.N.
Director of Nursing

April 28, 1988

Nancy Page, R.N., B.S.N.
2375 Laura Lane
Mountain View, CA 94043

Dear Nancy,

In considering your request, NorthBay Hospital Group dba VacaValley Hospital, at 1000 Nut Tree Road, Vacaville, CA 95688, and NorthBay Medical Center at 1800 Pennsylvania Avenue, Fairfield, CA 94533, gives you permission to administer a survey to support your Masters of Science in Nursing investigative efforts of intensive care nurses' attitudes toward organ donation.

We would appreciate being provided data obtained from this study upon completion. If there's anything else I can do, please call me at (707) 446-5713.

Sincerely,

ren:06c

Susan Garland
Assistant Administrator for
Nursing Services

APPENDIX B
Consent For Use
of Questionnaire

I give permission to Nancy Page, R.N. to use the questionnaire utilized for the article, "Intensive Care Nurses' Perceptions of Cadaver Organ Procurement" (published in Heart & Lung: May, 1983). I understand that she will be using this questionnaire to interview intensive care nurses and that the results of this study will be available to me upon completion. If I have any questions or concerns, I understand that I may contact Nancy Page or her graduate advisor, Sharon Hogan.

Nancy Page
2375 Laura Lane
Mountain View, CA 94043
(415) 964-5287

Sharon Hogan
Department of Nursing
San Jose State University
One Washington Square
San Jose, CA 95192
(408) 924-3152

5-10-88
date

Jeffrey Salloway, Ph.D.

APPENDIX C
Cover Letter
and Instrument

PLEASE NOTE:

Copyrighted materials in this document have not been filmed at the request of the author. They are available for consultation, however, in the author's university library.

These consist of pages:

105-111, Instrument

U·M·I

Nancy Page, R.N.
2375 Laura Lane
Mountain View, CA 94043

104

Dear ICU Professional Nurse:

I am a graduate student in nursing at San Jose State University. As my research topic, I have chosen to study intensive care nurses' attitudes toward organ donation.

It seems nurses have many different feelings about organ donation. This is particularly true of intensive care nurses who are often involved in dealing with potential organ donors.

I very much need your assistance in completing this project. Would you be willing to take a few minutes to fill out this questionnaire and let me know what your experiences have been, and what your feelings are on this topic? Your responses will be completely confidential. No attempt will be made to identify your responses and no specific information furnished by you will be made available to your place of work. If you agree to participate, please read and sign the enclosed consent form and return it with your questionnaire. The consent form will be separated from your questionnaire to maintain your confidentiality. An additional copy of the consent form is for your records.

When you have completed the questionnaire, simply place it in the attached addressed, stamped envelope and drop it into the nearest mail box. Please do this as soon as you are able, so I may include your thoughts in this study.

Thank you very much for your help.

Nancy Page, R.N.

APPENDIX D
Consent Form

AGREEMENT TO PARTICIPATE IN RESEARCH AT SAN JOSE STATE UNIVERSITY

RESPONSIBLE INVESTIGATOR: Nancy Page, R.N.

113

TITLE OF PROTOCOL: Attitudes of Intensive Care (ICU) Nurses Toward Organ Donation

I have been asked to participate in a research study that is investigating the attitudes of ICU nurses toward organ donation. The results of this study should further our understanding of how ICU nurses feel about organ donation in general, and how they feel about caring for the organ donor patient in particular.

I understand that:

- 1) I will be asked to answer a 34 item questionnaire that will take approximately 10 minutes to complete.
- 2) The possible risks of this study are that parts of the questionnaire may elicit some emotional feelings that may be uncomfortable for me. If this occurs, I may elect not to answer those questions.
- 3) The possible benefits of this study to me are that the questionnaire may cause me to more completely explore my feelings about this topic than I might have otherwise.
- 4) Alternative procedures included are none, for inclusion in this study.
- 5) The results of this study may be published, but any information from this study that can be identified with me will remain confidential and will be disclosed only with my permission, or as required by law.
- 6) I understand that there will be no financial or other compensation for participation in this study.
- 7) Any questions about my participation will be answered by Nancy Page, R.N. at (415) 964-5287. Complaints about the procedure may be presented to Sharon Hogan, Graduate Advisor at (408) 924-3134 or Virgil Parsons, Department Chairperson at (408) 924-3182. For questions or complaints about research subject's rights, or in the event of research-related injury, contact Serena Stanford, Ph.D. (Associate Academic Vice President for Graduate Studies) at (408) 924-2480.
- 8) My consent is given voluntary without being coerced; I may refuse to participate in this study or any part of this study, and I may withdraw at any time, without prejudice to my relations with my place of employment or San Jose State University.
- 9) I have received a copy of this consent form for my file.

I HAVE MADE A DECISION WHETHER I WANT TO PARTICIPATE. MY SIGNATURE INDICATES THAT I HAVE READ THE INFORMATION PROVIDED ABOVE AND THAT I HAVE DECIDED TO PARTICIPATE.

date

subject's signature

Nancy Page
investigator's signature