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Needs of Families of Adult Cardiac Surgery Patients During the Intensive Care Stay

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NEEDS OF FAMILIES OF ADULT CARDIAC SURGERY
PATIENTS DURING THE INTENSIVE CARE STAY

By

Michael L. Williams

A THESIS

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ABSTRACT

NEEDS OF FAMILIES OF ADULT CARDIAC SURGERY PATIENTS DURING THE INTENSIVE CARE STAY

By

Michael L. Williams

The purposes of this research were to identify needs of family of adult cardiac surgery patients during the intensive care stay, by whom these needs were met, and to identify demographic variables that were associated with identified family needs. Thirty-one families of adult cardiac surgery patients ranked 45 need statements using the Critical Care Family Needs Inventory. The need to have questions answered honestly was identified as the most important need by the families in this study. Nurses were identified as the person who met most of the needs of the families. Some significant differences in needs between spouses and children and between males and females were identified in this study.

DEDICATION

This research is dedicated to my grandparents, Harry and Cora Porterfield and Max and Donna Lee Williams, for teaching me the importance of family. Each of my grandparents have touched my life and have influenced how I provide nursing care to the families of my patients.

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This research project could not have been completed without the support and assistance of many people.

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CHAPTER I

INTRODUCTION

Most nurses recognize the importance of the family in assisting the critically ill patient to recover and regain his/her maximum functioning. Including families in the care of the patient is an essential component of holistic nursing care. However, most critical care nurses demonstrate little, if any, nursing care directed toward the family of the critically ill adult (Lust, 1984).

Cardiac surgery was estimated at 244,000 cases per year in 1984 by the American Heart Association (1987). The number of cardiac surgery patients and their families in potential crisis states is indeed high. In clinical practice, it has been observed that families of cardiac surgery patients vary in their response to impending cardiac surgery.

Perhaps fear of families or lack of preparation to care for families, prevents nurses from providing these individuals with emotional support. Critical care nurses would be more comfortable assisting families of critically ill patients, if better prepared. A description of family needs of cardiac surgery patients

can help critical care nurses provide these families with the assistance they need. Furthermore, a description of these needs can be used by critical care nurses to help families set priorities during this period of crisis.

Several studies have been done identifying needs of families of critically ill adults (Boykoff, 1986; Daley, 1984; Leske, 1986; Molter, 1979; Norris & Grove, 1986; Spatt, Ganas, Hying, Kirsch & Koch, 1986; Stillwell, 1984). Few studies thus far, however, specifically identified family needs of critically ill cardiac surgery patients (Cozac, 1988; Gilliss, 1984; Rodgers, 1983).

With sudden traumatic events or injuries, (automobile accidents, gunshot wounds, rape, etc.) the family has little or no preparation time to work through the crisis. Because cardiac surgery is most often a planned experience, families have more opportunity to anticipate the crisis and the disruption that may occur. Nurses can use this added time to prevent or minimize family crises that could ensue.

Problem Statement

For nurses to provide holistic nursing care, the family must also be incorporated into the care. Families provide a meaningful reference from which to view the patient. Families can also be helpful to

nurses by assisting with physical, emotional and psychological care of the critically ill cardiac surgery patient. Families can only do so if they themselves have resolved and/or adequately coped with the crisis state.

Without a clear understanding of family needs, nurses may be expending needless time, energy and monies on false perceptions of family needs. Johnson (1985) reported that indeed nurse's perceptions of spousal needs of myocardial infarction patients were not accurate (Johnson, 1985). If indeed, families can identify their own needs, nurses can optimize their interactions with families. This research will benefit the critical care nurse, as well as the family.

The purpose of this study was to investigate the needs of families of adult cardiac surgery patients while the patient was in the intensive care unit. It was anticipated that the needs of these family members would be different from those of family members of other critically ill adults than those undergoing cardiac surgery.

CHAPTER II

REVIEW OF LITERATURE AND CONCEPTUAL FRAMEWORK

Review of Literature

Until recently, little has been documented in the literature regarding family needs studies. However, there is a growing number of studies investigating family needs in a variety of settings.

One of the first studies of family needs was done in 1975 by Hampe who interviewed twenty-seven spouses of patients with terminal illness. Hampe was able to identify eight needs experienced by all of the subjects; including the need:

1. to be with dying person,
2. to be helpful to the dying person,
3. for assurance of the comfort of dying patient,
4. to be informed of the mate's condition,
5. to be informed of the impending death,
6. to ventilate emotions,
7. for comfort and support of family members, and
8. for acceptance, support and comfort from health professionals.

Hampe re-interviewed fourteen of the spouses after the death of the patient to identify if needs identified in the first interview would resurface. Eighty-seven

percent of the needs identified in the second interview had indeed been identified in the first interview.

Hampe also assessed nurses' perception of needs of grieving spouses. Hampe found that nurses' perceptions were not necessarily an accurate indicator of actual needs identified by the spouses themselves.

This study had several limitations. Interviewer bias was a concern identified by Hampe. The study was also prospective in design with a small sample size. Spousal needs were based on self-report and responses may have been what was perceived by the spouses as "acceptable" to the interviewer. Despite its limitations, the study identified the need for spousal and familial needs studies (Hampe, 1975).

In 1979, Molter conducted a study to assess needs of relatives of critically ill patients. The basis of this study was crisis intervention theory. Molter used an exploratory, descriptive design to interview 40 relatives of patients in critical care units. Patients had to have spent at least seventy-two hours in the critical care unit. Subjects had to be at least eighteen years of age to participate. Other demographic data about the patients was not specified.

A family "need" statement tool was developed through a literature review and survey of 23 graduate nursing students. The tool consisted of forty-five

statements on a Likert-type scale. Subjects were asked to respond to each statement by indicating a score on a scale from not important at all (1) to very important (4). One family member was chosen as the person to identify family needs. Subjects were also asked to identify who met their needs, if indeed they had been met. Subjects were also classified into socioeconomic groups according to the Hollingshead Two-factor index of social position. Interviews were twenty to sixty minutes in length.

Molter found that the need for hope was the primary need of families of critically ill patients. Molter found little relationship between age and socioeconomic class on identified needs and identifying who met most needs. At the conclusion of the interview, Molter asked the subjects to identify any additional needs that were not addressed in the 45 need statements. No new needs were identified. Most needs were met more than fifty percent of the time. Nurses were the individuals who most often met these needs (Molter, 1979).

Molter's study presented the same limitation as Hampe's study as both used the structured interview technique; i.e., potential for interviewer bias. Both investigators, however, agree that this technique allowed for clarification and discussion between the researcher and subjects. Another identified problem

with Molter's study was the fact that the sample was based on one individual family member being chosen to identify family needs, rather than using the entire family. The individual family member was not specified as spouse, sibling or other in this study.

In 1984, Daley conducted a study of the perceived immediate needs of families with relatives in the intensive care setting. Crisis theory was also utilized as the framework. In this study, Daley interviewed 40 family members within seventy-two hours of the patient's admission to the intensive care unit. Families were defined in the same way as in Molter's study. Daley used an instrument consisting of forty-six need statements, based on Molter and others, as well as personal experience. Daley also used a system to classify needs based on a previous study of Breu and Dracup (1978). Family needs were classified into six categories. These categories included the need:

1. for relief of anxiety,
2. for information,
3. to be with the patient,
4. to be helpful to the patient,
5. for support and ventilation,
6. and personal needs.

Results similar to Molter's were obtained. The need to know what is wrong with the family member ranked number one in this study. Those needs subdivided into the personal needs category were most often met by the nurse, while those titled the need for information were

most often met by the physician (Daley, 1984).

The findings of Daley's study suggest the family member's personal needs are not important in the initial seventy-two hour period. The need to know what is wrong with the patient and that the patient is doing well is very important within this time frame.

Daley suggested further replication of this study. Daley also explained that the rankings, in comparison to Molter's, may be different because the patient had been in the intensive care unit for 72 hours in Molter's study.

In 1986, Leske conducted a study similar to that done by Molter. A structured interview technique was used. Leske, in collaboration with Molter, changed the order of the forty-five need statements developed by Molter, using random selection. The instrument developed has subsequently been named the critical care family needs inventory (CCFNI).

In this study, Leske utilized twenty families of trauma patients consisting of 20 male family members and 35 female family members. Unlike the studies of Molter and Daley, Leske interviewed the patient's family as a group. In this way, families were able to give a consensus of opinion about the importance of their needs. This would hopefully eliminate the production of results based on only one family member.

Like Daley, Leske interviewed the clients within seventy-two hours after admission to the intensive care unit. Leske's sample was primarily composed of families of patients experiencing traumatic or violent events. Daley and Molter did not identify the characteristics of the patient problems. The need to feel there is hope was identified as the number one need, as in Molter's study. The ten most important needs identified by Leske's sample included the need to:

1. feel there is hope.
2. have questions answered honestly.
3. know the prognosis.
4. know specific facts concerning the patient's progress.
5. have explanations given in terms that are understandable.
6. receive information about the patient once a day.
7. be called at home about changes in the patient's condition.
8. feel that the hospital personnel care about the patient.
9. see the patient frequently.
10. know why things were done for the patient.

Perhaps the greatest limitation of Leske's study is the small sample size (N=20). Interviewer bias was also of concern. Although Leske used entire family units rather than individual family members, the results may be biased toward the most vocal or persuasive family member, rather than a true consensus of members. Leske suggested replication and further study (Leske, 1986).

Rodgers in 1983, performed a study of the needs of relatives of cardiac surgery patients during the

critical care phase. In this study, Rodgers utilized twenty relatives (N=20) of cardiac surgery patients. Molter's forty-five need statements were adopted as a questionnaire. One investigator collected the data between twenty-four and forty-eight hours after cardiac surgery (Rodgers, 1983).

In this study, Rodgers utilized one individual family member to represent the needs of relatives. The largest group of subjects were spouses (50%), then adult children (35%) and others (15%). Subjects in this study, like in Molter's study, were also asked to identify by whom their needs were being met.

The findings of Rodger's study show that needs of relatives of cardiac surgery patients are indeed different than those of family members whose relative has a critical illness other than undergoing cardiac surgery. The number one need for relatives in Rodger's study was to know they would be called at home for a change in the patient's condition. Relatives also identified nurses as the person most often responsible for need fulfillment and expressed a high frequency of satisfaction (Rodgers, 1983).

One limitation of this study was observer bias, as subjects were aware that the investigator was a nurse. Another limitation may have been the lack of understanding of written directions, as subjects

typically requested that the researcher remain in the room while they completed the questionnaire. Lastly, an extraneous variable that may have resulted in the high frequency of satisfaction may have been the visiting hour flexibility, as relatives could visit the patient at anytime. Rodgers noted these limitations and suggested replication with a larger sample, varied geographic location and use of other groups of critically ill patients (Rodgers, 1983).

In 1984, Gilliss published a study specifically designed to identify family stress during and after coronary artery bypass surgery. Although Gilliss identified family stress, rather than family needs or family crises, the concepts of stress, needs and crises overlap. Family stress may be a result of unmet family needs and may result in family crises. Gilliss' work provided insight into methodology when working with cardiac surgery patients.

Gilliss used patients and their spouses as "families" in this study. No other family members were utilized. Rodgers was able to obtain a relatively large sample size (N=71) for this longitudinal descriptive study. Two semi-structured interviews and a paper and pencil survey were utilized (Gilliss, 1984).

In this study, Gilliss identified a significant difference between stress in the patient and that of the

spouse. The results of this study suggested that spouses experience a higher amount of stress than the patient. The stressor most frequently identified by the patient and the spouse was waiting for surgery. Other major stressors included lack of control over hospital events, lack of privacy and what the spouses should do if difficulties arose once at home. Patients and spouses reported high levels of marital conflict, dissatisfaction and discord during the first six months after surgery (Gilliss, 1984).

Limitations of this study are not specifically addressed by Gilliss. Although the sample size is relatively large (N=71) and the sample is typical of most cardiac surgery patients, interviewer bias exists. Also because the design is longitudinal, the threats of history and maturation exist.

In 1988, Cozac conducted a study on the spouse's response to their mate's coronary artery bypass graft surgery. In this study, the investigator collected data through interviews on seven spouses (N=7). A semi-structured interview with open-ended questions was developed. The interview occurred two days after the spouse's mate had been transferred to the intensive care unit. A second interview was completed between three and four days after the first interview with six of the seven spouses. All interviews were tape-recorded and

then transcribed (Cozac, 1988).

The data were sorted, analyzed, and grouped information into categories. The investigator then defined the theme that dominated each grouping. The findings identified that there were three phases which occurred for the spouses. These phases were the preoperative, waiting during surgery, and the postoperative phase. The two themes that occurred in each of these phases were "reaction to" and "coping with" the situation. Cozac suggests that each spouse be viewed as a unique individual and treated accordingly. Based on the phases and themes, the author discussed several implications for nursing (Cozac, 1988).

The qualitative research method of Cozac's study is used infrequently and yields much information. This method however, can be limited in its application to a large population. The grouping of data is subject to researcher bias. Furthermore, because of the cost in money and time, this methodology allows only a small sample size to be used. Although the results are interesting, generalization to other clinical settings is limited.

In summary, the literature review demonstrated the need to continue investigations aimed at family needs. To gather data, several studies used interview techniques (Cozac, 1988; Daley, 1984; Gilliss, 1984;

Hampe, 1975; Leske, 1986; Molter, 1979; Stahler, 1984), while others used a questionnaire format (Rodgers, 1983; Krumberger, 1985). Furthermore, only a handful of studies have been conducted using families of patients undergoing cardiac surgery (Cozac, 1988; Gilliss, 1984; Krumberger, 1985; Stahler, 1984).

The literature review supports the assumption that spouses and families indeed have individual and collective needs. It has also suggested that spouses and families are indeed at great risk for high levels of stress and/or crisis (Cozac, 1988; Daley, 1984; Leske, 1986; Molter, 1979; Rodgers, 1983). According to crisis theory, cardiac surgery and its risks also put families at high risk for disruption and/or deterioration. It is nurses that are called upon to provide families with this support during this time.

Conceptual Framework

Crisis theory, human needs, family needs and Orem's self-care deficit theory of nursing were the conceptual basis and guides for this research. Each of these theories were used to explain the potential for crisis that exist for families, how human needs are related and how nursing care can impact on each of the other two theories.

Crisis Theory

Hospitalization often precipitates a crisis for an individual's family (Olsen, 1970). A family is defined as a basic societal unit in which members have a commitment to nurture each other emotionally and physically (Smilkstein, 1980). Hospitalization of an individual in an intensive care unit (ICU) greatly interferes with the families' ability to nurture each other. Critical care nurses because of accessibility to families, are in a position to offer preventative, supportive and therapeutic interventions during this crisis event (Hall, 1974). Therefore, a crisis framework is appropriate for this investigation.

Crisis is defined many ways by many different disciplines. Some individuals have proposed crises models that vary with disciplines (Narayan & Joslin, 1980). The definition of crisis adopted for this study is a "functionally debilitating mental state resulting from the individual's reaction to some event perceived to be so dangerous that it leaves him or her feeling helpless and unable to cope effectively by usual methods" (Dixon, 1979).

Several key terms in this definition are important for this research concerning families. First, there is a precipitating event. This event may be overt or covert and may occur immediately before the crisis

experience or weeks to months before the experience. A precipitating event is related to a perceived threat to physiologic or psychosocial needs (Dixon, 1979).

Secondly, the perception of the event is based on the personal meaning to the family (Geissler, 1984). Some families would consider loosing a large sum of money a crisis, while others may not even be upset. In other words, a crisis is not caused by an event, but is a reaction to an event (Dixon, 1979).

Lastly, the family develops ineffective problem-solving methods. Despite attempts by the individuals to utilize previous coping mechanisms, individuals experience emotional upset and impairment of cognitive function (Dixon, 1979). In the case of families, the crisis event disrupts usual family functions such as their daily routine, role definition, etc.

A crisis may also be situational and/or maturational in origin (Aguilera & Messick, 1986). A situational crisis is defined as "a crises that occurs because of specific situations that are unexpected or suddenly externally imposed" (Geissler, 1984, p. 2). Maturational crisis is defined as "crises that individuals undergo because of developmental changes" (Geissler, 1984, p. 2). Situational crises may occur simultaneously with maturational crises with individuals or families. Although, these crises may occur together,

the emphasis of this research was on situational crises.

Some assumptions of crisis theory have been developed over the years. The first assumption is that a crisis occurs in healthy individuals and families and is not equated with psychopathology. A crisis situation has potential for growth or deterioration (Ballou, 1981; Brownell, 1984 & Geissler, 1984). Another assumption is that life can be viewed as a succession of crisis events that occur within the life span of each individual or family and these crises upset their equilibrium (Narayan & Joslin, 1980). Lastly, crisis can happen to anyone (Ballou, 1981; Brownell, 1984).

Crisis theory has also been delineated into stages by several authors. Brownell (1984) proposed a six stage crisis continuum (see figure 1). This continuum which allows families to move between the six stages can be used to explain the variations of responses from different families with a member undergoing cardiac surgery. The crisis continuum allows movement from a potential crisis state to a full crisis state (Brownell, 1984).

FIGURE 1
CRISIS CONTINUUM

Potential Crisis State	Precrisis State	Immediate Crisis State	Intermediate Crisis State	Advanced Crisis State	Full Crisis State
Potential exists for all	Person who: a) has high probability of exposure to stressful event b) has inade- quate support c) lack coping abilities d) has poor history of handling prob- lems	Person who: a) has expo- sure to stressful event b) perceives current situa- tion as very stressful	Person who: a) perceives current situ- ation as very stressful b) has attempted to solve problems c) has failed to resolve problems	Person who: a) has con- tinued to draw on inner resources b) has con- tinued failing in attempts to resolve problems	Person who: a) has failed at all attempts to solve problem b) believes all resources have been used c) lacks re- lief of stress

*From Brownell, M.J. (1984). The concept of crisis:
Its utility for nursing. Advances in Nursing
Science, 6, 10-20.

Brownell's crisis continuum allows individual's perceptions of the crisis event to vary even among the same family. Families can also be viewed collectively upon this continuum. Brownell's potential crisis state is similar to the precursor to the crisis event described in other works (Ballou, 1981; Shontz, 1975).

Disruption that occurs as a result of a crisis event, such as death of a family member, suicide, hospitalization, etc., causes the family resources to be challenged. Families of patients with critical illness or major surgery, such as cardiac surgery experience a stressful event and have many needs.

Human Needs

Human needs are defined as a requirement or necessity for life. Maslow's theory of human motivation is based on the premise that individuals strive to meet their needs and realize their full potential (self-actualization). According to Maslow (1968), the ability to become self-actualized is based on a hierarchy of needs. The base of Maslow's hierarchy contains the most fundamental needs (physical) and moves toward the most advanced needs, safety, love and belongingness, esteem and self-actualization, respectively (Maslow, 1968).

Maslow believes that the more basic the need, the stronger the person perceives that need to be to the individual. For example, physical needs have a greater

need for satisfaction than love and belongingness needs. If an individual's most basic needs are satisfied, the individual can then attempt to satisfy higher level needs.

Maslow (1954) maintains that individuals strive to move upward on the hierarchy (toward self-actualization). However, it is probable that individuals and families regress to a lower level of need fulfillment during illness or perceived crisis. This lower level need will become more acute to the individual, as its need for fulfillment is so strong.

Human needs can be viewed as being individual or group needs. As a unit, families experience both individual and family needs. Family need are determined by the individual needs, family dynamics, and family goals. Furthermore, family needs vary with the developmental stage of the family.

Family Needs

Family needs are those requirements necessary for continued family functioning. Family needs can vary in type, quantity of needs and/or intensity of needs as the family develops. These needs are determined by the family's perception of the need and developmental task (Miller, 1980). The potential threat of not fulfilling a family need, plays a large part in the family's perception of that need.

Families, like individuals, are dynamic beings (Roberts, 1983). Families have numerous influences continuously affecting their functioning; including developmental stages. The developmental stage of the family may affect their perception of a potential crisis. According to Duvall (1977), most families experience similar developmental stages. The eight family developmental stages suggested by Duvall begin with the married couple and end with the death of the surviving spouse.

Families, like individuals, place their needs on a hierarchy. Physical needs for the family continue to be the most basic need. For patients and families, the need for cardiac surgery may be perceived as a major threat to life, the most basic need. It is crucial then to prevent crises, that nurses identify and provide for family needs.

Nursing

According to the American Nurses Association's Social Policy Statement (1980), the unique function of the nurse is to diagnosis and treat human responses to actual or potential health problems. The lack of needs satisfaction can be a health problem for individuals and families. Responses to unmet needs are within the scope of nursing practice to independently treat. According to Orem, nursing functions to maintain or regain self-

care agencies; the ability to care for oneself or one's family (Orem, 1985). Human needs in Orem's terms, are called therapeutic self-care demands. In other words, those things that are required by the individual or family.

When a family experiences a disruption in its functioning, such as cardiac surgery, human needs or self-care demands exceeding the family's self-care agencies. Self-care deficits occur as a result of an imbalance between self-care agencies and therapeutic self-care demands. It is therefore the function of the nurse to prevent or minimize these potential imbalances. When an individual or family is unsuccessful in maintaining this balance, nurses can provide supportive or therapeutic treatment to assist the family to regain its self-care agency (Orem, 1985).

Nursing can then function in one of three areas, according to Orem. Nurses may function within a wholly compensatory role, partially compensatory role or supportive/educative role. In other words, nurses may totally compensate for the family's inability to function, partially compensate, or provide support or education to the family to allow them to regain their function (Orem, 1985).

Summary and Implications for Study

The identification of needs that families of cardiac surgery patients exhibit is important to critical care nurses. It is through this identification of needs that critical care nurses may prevent a full-crisis state. By intervening with the family to contain their threats or demands within a reasonable range, the critical care nurse facilitates family stability.

A major role of the nurse is to assist families to meet their needs. Family needs are based on their perceptions and require clear identification of their needs to assist them to regain their optimal functioning. If family needs are neglected or unmet, crisis may develop.

A crisis can easily develop when the heart, one of the body's most cherished organs, is afflicted. The heart is perceived by many people as the essence or spirit of the person. Although the cardiac surgery is usually indicated for only one person in the family at a time, the perception of the event for the entire family is key to averting or assisting during a crisis.

The assumption that cardiac surgery is a crisis event for families is generally accepted. By identifying their needs, families of cardiac surgery patients can be assisted by nurses to minimize or contain their perceptions of the event and thus help

prevent a full crisis state. By providing the family with preventative, supportive and therapeutic interventions based on their identified needs, the nurse decreases their risk for a full crisis.

If critical care nurses are made aware of the crisis continuum and the potential impact of crisis on families, nurses will have a broader knowledge base to plan care for individual families.

Research Questions

The questions addressed through this research study were: (1) what are the needs identified by families of adult cardiac surgery patients during the intensive care stay?, (2) by whom are these needs met?, and (3) is there an association between selected demographic characteristics and identified family needs?

Definitions of Terms

The following operational definitions were utilized for this research:

(1) crisis period: the forty-eight (48) hours time period after admission of the open heart patient to the operating suite.

(2) family: adults (18 years or older) who are spouses, natural children of the patient and spouses of the natural children who visit the patient in the ICU.

(3) family need: those needs identified by families of adult cardiac surgery patients on the

Critical Care Family Needs Inventory (CCFNI). (Appendix A).

(4) adult cardiac surgery patient: any individual over eighteen (18) years of age undergoing cardiac surgery which requires cardiopulmonary bypass.

CHAPTER III

METHODOLOGY

Research Design

A descriptive survey design was used to identify family needs of adult cardiac surgery patients. The Critical Care Family Needs Inventory (CCFNI) (Appendix A) and a demographic questionnaire (Appendix B) were used to secure information from the families.

This design allowed for individual input of respondents to calculate the family mean. Individual questionnaires also allowed for determination of a family score and family mean score which was used to calculate a sample mean. The questionnaire was self-administered, but presentation and data collection by the investigator were employed to assure a high return rate. The researcher (or assistant) was available to answer or clarify questions.

Sample

The target population was families of adult clients undergoing cardiac surgery. A convenience sample of 31 families with a relative admitted to the ICU of one midwestern hospital following cardiac surgery was used.

Patient inclusion criteria were: (1) absence of intra-aortic balloon pump, (2) no extraordinary circumstances; e.g., ventricular assist devices, sternum not wired or resuscitation during the first 48 post-operative hours, (3) no previous cardiac surgery, and (4) age 18 years or older.

Family member inclusion criteria were:

(1) must have visited the patient in the ICU, (2) agree to participate, (3) able to read and write the English language, (4) no visible signs and symptoms of undue stress and (5) age 18 years or older. All subjects who met the established criteria were included until a total of 31 families was obtained.

Setting

The site for this study was a 250-bed tertiary care center located in a population area of approximately 175,000. The medical center serves the community by providing general medical-surgical services as well as specializing in cardiovascular surgery, oncology, orthopedics and pulmonary medicine. In this setting, adult cardiac surgery patients were admitted directly to the intensive care unit after surgery. The unit consists of eight beds. The nursing care mode is primary care with a staff of all registered nurses.

Instrument

To assess the needs of families during the intensive care stay, the Critical Care Family Needs Inventory (CCFNI) developed by Molter and Leske was used. The CCFNI lists 45 need statements to be rated on a 4-point Likert-type scale in the following format: (1) not important, (2) slightly important, (3) important, and (4) very important (See Appendix A). Permission to use this tool was received from Leske (See Appendix C).

In Leske's study (1986), the families took approximately thirty minutes to complete the CCFNI tool. Reliability was .98 using Cronbach's alpha coefficient. Content validity was previously established (Molter, 1979) using 23 graduate nursing students.

A space for family members to identify other needs that were not previously identified in the other 44 need statements was added by Molter and Leske as the last item on the CCFNI. For this research, the CCFNI was adapted. The adaptation was the addition of one question on the CCFNI which asked who met each of the identified needs. In this manner, the individual(s) who met the family needs could be identified.

Subjects were also asked to complete a demographic information sheet to use for data analysis which included information about previous visits to an open

heart patient, medical education, age, and other information (See Appendix B). Using a patient data sheet, data regarding the type of surgical procedure, complications and length of surgery were collected as these items were considered potential extraneous variables (See Appendix D).

Protection of Human Subjects

Approval from appropriate human subjects review committees at the university and the medical center was obtained prior to beginning the data collection. A statement regarding informed consent for the subjects was incorporated into the instrument directions (see Appendix A). A handout regarding informed consent was also given to each family member (see Appendix E) following discussion of the project by the investigator or assistant (See Appendix F).

Risks in this study were relatively small and of psychological nature if they occurred. The procedure used in the CCFNI tool was designed to minimize discomfort to the subjects and had been used in the past (Leske, 1986). The assistant was educated to identify distress during the interview. In the event of any signs of distress during the data collection, the data collection was terminated and the subjects were allowed to express their distress and discuss it with the investigator. The completion of the questionnaire

indicated the subject's implied consent.

Procedure

A survey of the intensive care unit was made every morning to assess the availability of subjects that met the inclusion criteria. The researcher also discussed potential subject availability and suitability with the nurses in the unit. Nurses were asked to contact the researcher when the family members visited the patient in the intensive care unit, in the event the researcher was not readily present. All family members that met the inclusion criteria were sought. Data were collected through the entire day and evening as needed.

Families were contacted within the first forty-eight (48) hours after the patient had gone to surgery. A private consultation room was used for data collection. Subjects were approached and requested to complete the CCFNI and demographic questionnaire after sample criteria had been assured (See appendix F). Agreeing to and actual completion of the questionnaire indicated implied consent (See appendix A). Subjects were able to terminate their participation at any point without consequence.

The researcher (or trained assistant) remained available to answer questions while the family completed the questionnaire. The data were recorded on the CCFNI; individual questionnaires were coded to correspond with

the patient demographic form to assure anonymity and to allow correlation between patient complications and perceived family needs. The researcher (or assistant) also collected and recorded data on the patient demographic form.

CHAPTER IV

RESULTS

During a 4 month period from August 1988 to November 1988 (except for a 20 day absence by the investigator), all families meeting the inclusion criteria were approached and asked to participate in this study. All of the families had a family member who had undergone cardiac surgery. All families approached agreed to participate with only 2 family members declining stating they were "too stressed to fill out a form." This study asked the family members of adult cardiac surgery patients to identify their needs during this stay.

The data collected were analyzed by several different methods. First, the responses on the CCFNI were coded with a score of 4 indicating a "very important" response. A score of 3 designated a "slightly important" response, 2 designated a "important" response and 1 designated a "not important" response.

A mean score for each family was then calculated from these scores. Then each family mean was used to

calculate a sample mean. The calculation of a family mean and then a sample mean was used to control for variations in family size. For instance, a large family with unusual family needs could easily influence the sample mean if not controlled for in some manner.

Ordinal level data were collected for this research investigation. For comparing differences between groups the Mann Whitney U test was used. A decision to utilize mean scores was also made to facilitate comparison with previous research, even though the median would have been more appropriate for ordinal level data. Demographic data were analyzed using percentages ranges, and means.

Characteristics of Subjects

Sixty-six individuals meeting inclusion criteria visited 31 patients while in the ICU. Two daughters of one family declined to participate. One daughter who declined to participate was a physician at the research site. Therefore, there were 64 subjects; including 23 spouses, 20 daughters, 9 sons, 9 daughters-in-law, and 3 sons-in-law. Eight patients had deceased spouses.

Demographic information of the 31 patients in the study, showed 197 possible spouses, daughters, sons, daughters-in-law and sons-in-law. However, only 66 subjects met the inclusion criteria and only 64 subjects (32%) participated. Observations made by the

investigator indicated that many family members were unable to visit the cardiac surgery patient because they lived out of town. Many family members were not included in the study because visitation in the ICU was a condition of the inclusion criteria.

Seventy percent of the spouse sample was female (n=16) while thirty percent were male (n=7). Data on general education, education within a medical field, taking the preoperative tour, age, and time interval between being told of surgery and actual surgery time are listed in Table 1. More specific information about characteristics of the sample is located in Appendix G.

Table 1.

Selected Sample Demographics

	Spouse (n=23)	Children (n=41)
Mean age (years)	62	38
Educated in a medical field	4%	12%
Completed high school	87%	100%
Prior visit of open heart patient in an ICU	26%	10%
Preoperative tour taken	91%	68%
Time between being told of surgery & actual surgery (days)	10	10

Patient Demographics

All patients (n=31) in this study had cardiac surgery. Sixty-five percent (n=20) of the patients were male. Sixty-five percent (n=20) had no post-operative complications while in the intensive care unit. The mean age of the cardiac surgery patients was 64. Ninety percent (n=28) of the patients had coronary artery bypass graft surgery, while the remaining ten percent (n=3) had aortic valve replacements. The length of

surgery ranged from 3.0 to 5.5 hours. (Refer to Appendix G for more specific demographic data).

Research Question 1

What are the needs identified by families of adult cardiac surgery patients during the intensive care stay? In order to analyze the first research question, a sample mean was calculated from the family mean scores for each need statement. The two most important needs identified by the families were to: (a) have questions answered honestly and (b) know the prognosis. The 15 most important psychosocial needs identified by the families in this sample are presented in Table 2. (See Appendix H for the mean score for all of the 45 need statements).

Table 2

15 Most Important Needs Identified by the Family Sample
in Order of Mean Value

Need	Mean
To have questions answered honestly.	3.89
To know the prognosis.	3.88
To be assured that the best care possible is being given to the patient	3.86
To feel that the hospital personnel care about the patient	3.83
To know specific facts concerning the patient's progress	3.77
To have explanations given that are understandable	3.74
To be called at home about changes in the patient's condition	3.74
To know how the patient is being treated medically	3.74
To feel there is hope	3.73
To know exactly what is being done for the patient	3.70
To see the patient frequently	3.68
To have explanations of the environment before going into the critical care unit for the first time.	3.65
To receive information about the patient once a day	3.62
To know why things were done for the patient.	3.62
To have the waiting room near the patient.	3.50

The two least important needs as determined by the families were to: (a) be alone at any time and (b) be encouraged to cry. The five least important needs described by the families are listed in Table 3.

Table 3

5 Least Important Needs Identified by the Family Sample
in Order of Mean Value

Need	Mean
To be told about chaplain services	2.38
To talk about negative feelings such as guilt or anger	2.35
To be told about someone to help with family problems.	2.27
To be alone at any time	2.15
To be encouraged to cry	2.04

There were many different responses given by the family members under the category "other." Comments relating to their own physical needs included a "room to smoke," "coffee available throughout the night in the family waiting lounge", "the use of the wheelchair for my mother was very nice," "inadequate seating in the family lounge" and a "need for more overnight rooms." Many comments were offered regarding the "competent and

calm nurses in the ICU," "I have witnessed many extra acts of kindness to patients and others by the nursing staff," "not being restricted to any specified visiting hours was very beneficial," "the preoperative tour was extremely helpful in relieving my anxiety," "some nurses seemed to view the family as the 'enemy' rather than working with us as a team," "the friendlessness of everyone in the hospital," "empathy from all of the personnel," and "the surgeon spending time with the whole family after surgery was nice."

Research Question 2

Once family members had identified their needs, the second research question was addressed: by whom were each of their needs met? Descriptive techniques were utilized to analyze the results. Nurses, doctors, clergymen and other family members were identified as the person who met their needs most often. The person reported to have met the 10 highest needs are summarized in Table 4. Responses to all 45 need statements is listed in Appendix I.

Table 4

Individual Identified as Meeting the Ten Highest Needs

Need Statement	Nurse	Doctor	Clergy	Family	Total
	n (%)	n (%)	n (%)	n (%)	n
To know the prognosis.	18 (30)	38 (63)	1 (2)	2 (3)	60*
To have questions answered honestly.	27 (49)	23 (42)	4 (7)	0 (0)	55*
To know why things were done for the patient.	32 (58)	17 (31)	5 (9)	1 (2)	55
To have explanations of the environment before going into the critical care unit for the first time.	41 (84)	4 (8)	3 (6)	1 (2)	49
To have explanations given that are understandable.	23 (55)	15 (36)	4 (9)	0 (0)	42
To know how the patient is being treated medically.	22 (52)	15 (36)	5 (12)	0 (0)	42
To feel there is hope.	20 (50)	14 (35)	5 (13)	1 (2)	40

Table 4 (continued)

Individual Identified as Meeting the Ten Highest Needs

Need Statement	Nurse n (%)	Doctor n (%)	Clergy n (%)	Family n (%)	Total n
To know exactly what is being done for the patient.	24 (60)	11 (28)	5 (12)	0 (0)	40
To feel that the hospital personnel care about the patient.	18 (49)	13 (35)	6 (16)	0 (0)	37
To be assured that the best care possible is being given to the patient.	20 (57)	10 (29)	4 (11)	1 (3)	35

* Denotes other individuals were identified 2% (n=1) of the time on these two needs.

Of those needs which could be considered nursing and/or medical in nature, nurses met most of those needs with the exception of the need to know the prognosis, to talk about the possibility of the patient's death, and to be alone at any time. This finding supports the important role the critical care nurse plays in meeting the needs of families of cardiac surgery patients.

Needs identified as being met most often by the physician included the need to know the prognosis, to talk to the doctor every day and to talk about the possibility of the patient's death. Other family members and friends were also identified as meeting some needs including the need to have friends nearby for support and to have another person with them when visiting the critical care unit. See Appendix L.

Clergy were identified as meeting only one need and that was the need to have the pastor visit. It should be noted that this need was identified as very low in importance to the families in this study. Likewise, to have someone to help with financial problems was identified as of low importance and being equally met by the nurse, doctor, clergy and "anybody who wants to help."

Research Questions 3

The last research question was to determine if any relationships existed between demographic

characteristics and identified family needs. In order to determine if significant differences between spouse and children groups and between male and female groups existed, the Mann Whitney U test was used. Five needs were found to be rated significantly different at the .05 level between the spouse and children groups: (a) to know the prognosis, (b) to have explanations of the environment before going into the critical care unit for the first time, (c) to talk to the doctor every day, (d) to have questions answered honestly, and (e) to have explanations given that are understandable. Two needs were found to be rated significantly different at the .01 level between spouse and children groups: (a) to know how the patient is being treated medically, and (b) to have a bathroom near the waiting room. See Table 5. Appendix J lists all of the values of the Mann Whitney U test between spouse and children responses.

Table 5

Needs Rated Significantly Different between
the Spouse and Children Groups

Need	Mann Whitney z value
To know the prognosis.	2.187*
To have explanations of the environment before going into the critical care unit for the first time.	1.929*
To talk to the doctor every day.	1.711*
To have questions answered honestly.	1.890*
To know how the patient is being treated medically.	3.304**
To have a bathroom near the waiting room.	2.604**
To have explanations given that are understandable.	1.956*

*Significant at the 0.05 level if $z > 1.58$

**Significant at the 0.01 level if $z > 2.58$

Nine needs were found to be rated significantly different between the female and male groups at the 0.05 level. See Table 6. Mann Whitney U test values of all 45 need statements are listed in Appendix K.

Table 6

Needs Rated Significantly Different between
Female and Male Groups

Need	Mann Whitney z value
To have a specific person to call at the hospital when unable to visit.	1.605*
To talk about negative feelings such as guilt or anger.	1.945*
To have directions as to what to do at the bedside. start on time.	1.985*
To know which staff members could give what type of information.	1.720*
To be encouraged to cry.	2.121*
To have visiting hours start on time.	2.101*
To help with the patient's physical care.	2.353*
To be told about transfer plans while they are being made.	2.257*
To be called at home about changes in the patients condition.	2.074*

*Significant at the 0.05 level if $z > 1.58$

CHAPTER FIVE

DISCUSSION/IMPLICATIONS/CONCLUSIONS

Discussion

In order to relate the results of this study to previous studies, the 45 needs statements of the CCFNI were categorized into the six categories developed by Breu and Dracup (1978). See Table 7 for the specific classifications of the need statements.

Need for Information

The needs identified as most important by families of cardiac surgery patients in this study are congruent with the research of Molter (1979), Leske (1986) and Rodgers (1983). Previous studies (Krumberger, 1985; Rodgers, 1983; Stahler, 1984) of families of cardiac surgery patients identified informational needs as very important also. Informational needs were identified as the greatest needs in all of these studies. See Table 8 for a ranked comparison of this study to previous studies.

Table 7

CCFNI Need Statements Categorized Using Breu and
Dracup's Model

Need for Information

Need Statements 1, 3, 4, 5, 9, 11, 13, 15, 16, 19,
25, 31, 34, 35, 39, 40, 41, 43

Need for Relief of Anxiety

Need Statements 2, 14, 17, 28, 29, 42

Need to Be With the Patient

Need Statements 6, 10, 36, 44

Need for Support/Ventilation

Need Statements 7, 12, 21, 22, 26, 27, 30, 37

Personal Needs

Need Statements 8, 18, 20, 23, 24, 32, 33, 45

Need to Be Helpful to the Patient

Need Statement 38

Table 8

Ten Most Important Needs of this Study Compared to Importance in Previous Studies

Need Statement	Importance in this study	Importance in Molter's study	Importance in Leske's study	Importance in Rodger's study
1. To have questions answered honestly.	1	6	2	3
2. To know the prognosis.	2	5	3	NA
3. To be assured that the best care possible is being given to the patient.	3	13	12	9
4. To feel that the hospital personnel care about the patient.	4	2	8	2
5. To know specific facts concerning the patient's progress.	5	7	4	5
6. To have explanations given that are understandable.	6	9	5	8

Table 8 (continued)

Ten Most Important Needs of this Study Compared to Importance in Previous Studies

Need Statement	Importance in this study	Importance in Molter's study	Importance in Leske's study	Importance in Rodger's study
7. To be called at home about changes in the patient's condition.	7	4	7	NA
8. To know how the patient is being treated medically.	8	17	14	17
9. To feel there is hope.	9	1	1	7
10. To know exactly what is being done for the patient.	10	15	13	4

NA denotes not applicable.

It is clear that providing families with information is important to the families. The importance of providing this information to families of cardiac surgery patients cannot be emphasized enough. Ten of the first 15 needs identified as most important by these families were categorized as the need for information.

Need for the Relief of Anxiety

The need for relief of anxiety was also identified in this study and in other studies (Leske, 1986; Molter, 1979). To be assured that the best possible care is being given to the patient and to feel there is hope are two needs related to relief of anxiety that are within the top 10 needs identified in this study. This is comparable to other studies (Leske, 1986; Molter, 1979; Rodgers, 1984). See Table 9 for a ranked comparison of these needs with the other three studies.

Table 9

Three Most Important Relief of Anxiety Needs of this Study as Compared to
Other Studies

Need Statement	Importance in this study	Importance in Molter's study	Importance in Leske's study	Importance in Rodger's study
To be assured that the best care possible is being given to the patient.	3	13	12	9
To feel that the hospital personnel care about the patient.	4	2	8	2
To feel there is hope.	8	1	1	7

Need to Be With the Patient

The need to see the patient frequently was the eleventh most important need in this study. Despite the importance of this need, families in this study identified the need to have visiting hours changed for special conditions and to visit at any time identified as moderately low (30 and 31st respectively). The intensive care unit at this research site had open visiting hours. Perhaps visiting needs were being met.

With the exception of the need to see the patient frequently, other needs categorized as needs to be with the patient were identified as relatively low in importance. The need for visiting hours to start on time, to have visiting hours changed for special conditions, and the need to visit at any time are included here. Perhaps the nature of open visiting hours at the research site allowed these needs to be met and thus perceived as less important.

Need for Support/Ventilation

Several studies (Leske, 1986; Molter, 1979; Rodgers, 1984) have shown that the need for ventilation of emotions and emotional support was relatively low in importance for family members of critically ill patients. Of the 10 least important needs identified by the families in this study, 6 coincide with the results of Rodger's study, 8 with the results of Molter's study

and 3 coincide with results of Leske's study.

Families in this study identified that they care least about the needs to be encouraged to cry, to be alone at any time, to have someone to help with family problems, to talk about negative feelings and to be told about chaplain services. Perhaps one explanation for the low importance of these needs is the planned nature of cardiac surgery. Many of these families have had the opportunity to do many of these things before hospitalization of their family member.

Personal Needs

The families of this study identified personal needs as moderately low to low importance. Many families expressed that they felt the nurses' main concern should be the patient. Some families felt nurses cared for patients without incorporating the family into care and were upset about this phenomenon. In order to be most effective in helping each family, the nurse must assess the role the family plans to play in the recuperation of the patient. Because of the high technology nature of the critical care environment, nurses can lose sight of the patient and family as human beings with needs, wants, and feelings. Nurses must not forget the human aspect of these families.

Summary

This study attempted to compare responses of all family members as well as a total family response. Differences among members were found. Some needs were identified significantly different in importance between spouse responses and responses of the children. It appeared that children reported a greater importance in specific needs than the spouse group in all responses.

Why the children group reported greater importance in some needs cannot be answered by this research. However, several thoughts may be suggested. Most of the need statements identified as more important by children were information needs. Perhaps children are simply less stressed and more prepared to accommodate more information than the spouse group. The one personal need significantly different between these groups is the need to have the bathroom near the waiting. It is possible the children identified this need higher because they were able to eat and drink, while the spouses were too upset to do so. It is also possible that the children reported a greater need for explanations that are understandable because prior to hospitalization they usually have not attended the doctor's office appointment like the spouse has done.

Furthermore, females rated nine needs significantly different than the male group. In all cases, females

identified these needs more important than the male group. The higher importance of the need to have directions as what to do at the bedside is not surprising, since females tend to assume the caretaker role more often than males. The need to talk to the same nurse every day perhaps can be explained by the fact that most of the nurses caring for these patients and families were female also. Some of the other needs rated significantly different between females and males were in the need for support/ventilation category. Perhaps, it is more natural for females to relate a greater need for support/ventilation than males. Lastly, it is uncertain why the need to have visiting hours start on time is more important for females than males. It should be noted here that despite open visiting hours in this setting, the nurses were allowed to use discretion regarding visitation. Perhaps males were less likely to comply with nursing discretion while females viewed the nurse's suggestion for visitation as "visiting hours."

The findings of this study suggest that nurses are the persons who most often meet family needs. It is crucial that nurses recognize their role in caring for families and assume this pivotal role. Likewise, it is important for nurses to note that families expect physicians to discuss the prognosis and to talk about

the possibility of death.

The needs of families are important for nurses to assess and subsequently intervene to prevent a full crisis state. Families, with a member undergoing cardiac surgery, are in a precarious situation. It is the nurse who is most accessible to the family and the person the family reports as meeting their needs most often. Thus, the nurse must assume responsibility for this important and potentially pivotal role.

It is crucial that all nurses recognize their role and take steps to help families in this pre-crisis state. Nurses must recognize the unique nature of each family and assist each family to meet their needs.

Implications

This study adds to the knowledge base of needs of families in critical care environments. These findings have implications for nurses in clinical practice, nursing educators, nursing administrators and nurse researchers.

Nurse educators have an obligation to incorporate the findings of this and similar studies into their instructional activities so that students can be better prepared to help families. Furthermore, nurse educators need to assist students in development of therapeutic communication skills, and family assessment skills.

Family needs theory, human needs theory and the

crisis continuum provide a useful framework for giving care to these families and should be learned while in nursing school. If nursing students can be taught to identify family needs and basic human needs of individual family members, these needs can be met more readily. Furthermore, if nursing students can be taught to recognize signs and symptoms of various crisis states, they may be able to avert a full crisis state. Lastly, particular attention to families in all areas of nursing education is paramount for holistic nursing care.

Nursing administrators must provide staffing which is adequate to allow nurses to provide care to these families. They must also recognize that nursing supervisors by virtue of their 24 hour presence do not necessarily have expertise in family care. Supervisors, if designated to intervene in family crises should be required to participate in crisis intervention classes, family classes and current research on families in order to assist families after cardiac surgery.

It is also important that nursing administrators and practitioners recognize the importance of providing nursing care to the family. Administrators must provide adequate staffing for nurses to interact and intervene with families of cardiac surgery patients. Practicing nurses must also recognize the importance of the family

when providing care to the cardiac surgery patient. Practitioners must legitimize spending time with families. Involvement of families in patient care is no longer a luxury, but a necessity if families are to participate in the hospital and post-discharge care of the cardiac surgery patient.

The nursing process can provide a helpful framework for nurses when caring for cardiac surgery patients and their families. A nursing care plan for cardiac surgery patients and families in the ICU based on the findings of research in the area of family needs may include:

1. Assess family needs using an abbreviated version of the CCFNI.
2. Provide the family with as much specific information as possible; including progress and medical treatment (Bednarczyk, 1988).
3. Use language that family members can understand.
4. Convey a caring, honest attitude at all times.
5. Answer questions honestly and/or provide family with the appropriate personnel to answer the questions (Bednarczyk, 1988).
6. Allow family to visit patient frequently; without specific visiting hours.
7. Assure that the physician discusses the prognosis and/or complications before and

immediately after surgery.

8. Be aware of family needs and perhaps assign another nurse or clinical nurse specialist to the family if the patient is unstable, has complications and/or prognosis is poor.
9. Continue assessment of family for changes in needs and coping strategies throughout the ICU stay.
10. Provide nursing care to the cardiac surgery patient with family members present to demonstrate that the best care possible is being provided and that you care about the patient.
11. If the family are not present in the hospital, call them at home about deteriorations in condition and when the patient is being transferred out of the ICU.

It is also very important to identify which health care worker will be responsible for providing families with specific information. Based on this study, certain information, such as to know the prognosis and to talk about death, should be left to the physician to discuss with the family. Furthermore, it is vital that all health care workers are communicating the same message to the family to develop an honest, trusting relationship.

Families of cardiac surgery patients have many needs. Needs which are primarily for information and relief of anxiety. It is crucial that nurses identify how they can assist families during this crisis period. Nurses must assume responsibility for the care of families of cardiac surgery patients.

Nurses must recognize that families have needs and that it may not be possible for the primary nurse to intervene with families. However, being busy with patient care does not dismiss the fact that families have needs. It is important that nurses identify someone; perhaps another staff nurse, clinical nurse specialist or nursing supervisor, who can intervene when patient care is so demanding they are not able to meet family needs.

Nursing researchers must continue to conduct studies in the area of family needs. Particular interesting would be further research on family needs with a variety of critically ill patients; i.e., trauma, medical cardiovascular problems, respiratory problems, pediatrics, and others. Nurse researchers need to develop a condensed version of the CCFNI to use routinely as a family needs assessment tool. Likewise, researchers need to continue to focus further study on families in the critical care environment.

It would be helpful if nurse researchers could

quantify the time and money required for family interventions to assist nursing administrators in staffing arrangements. Perhaps a study on the effectiveness of a clinical nurse specialist on family needs is warranted. Especially interesting would be a comparison of families with a scheduled cardiac surgery and those families whose member has emergent surgery.

Other research studies could focus on different methodologies; i.e., interview, questionnaire, etc., and which interventions are the most beneficial; i.e., open visiting hours, phone call to the family at home and others. A follow-up study after the patient is transferred out of the ICU and perhaps post-discharge would add information about recall of the ICU stay. Activities aimed at creating a diversion could be used for families in the waiting lounge in order to relieve anxiety; i.e., radio, television, bingo, card games, puzzles, magazines, and others.

The establishment of family support groups and evaluation of their effectiveness could provide valuable information on a cost-effective method of providing information to families and relieving anxiety. Furthermore, a study on family members who did not visit would be interesting. A study comparing identified family needs and flexibility of visiting hours would also be interesting.

Sources of Measurement Error

Some sources of measurement error exist in all studies and this study is no exception. The potential sources of measurement error in this study included: transitory physical problems of family members (one spouse was known to be wheelchair bound), area where the families completed the study (a consultation room was suggested, but not always utilized) and potential misunderstanding of the directions to the instrument.

Limitations

One limitation of this study is the relatively small sample size and the fact that a convenience sample was used. Results of this study can be generalized to only this hospital. The percentage of female spouses of cardiac surgery patients in this study (30%) is more than would be expected (15%) based on national averages (Heart Facts, 1987). This study also only accounts for those subjects who visited the patient while in the ICU. It is not known why some family members did not visit and what their needs were.

Furthermore, it is not known if the cardiac surgery patient themselves are representative of the general population. This research site is known for its high-risk, elderly cardiac surgery patients. The families may or may not be representative of the general population. It is also not known if all subjects

understood the directions on the CCFNI and demographic instrument.

Recommendations

In conducting a similar study, the researcher has several recommendations:

1. Because of the large amount of investigator time required for data collection, families could be contacted preoperatively and an appointment time to complete the CCFNI could be established. It should be realized that that preoperatively, families may be too distressed to agree to participate.
2. Inclusion of emergent cardiac surgery patients could add valuable information about how needs of these families vary compared to scheduled procedures.
3. Staff nurses could be utilized to collect data according to the research procedure established. This may increase the acceptance of the results by staff nurses and facilitate a positive relationship between nurses and family.
4. Less demographic information collected about the patient could be collected.

Conclusions

This study identified family needs from an individual and collective perspective from 31 families of cardiac surgery patients. The greatest family needs were to have questions answered honestly and to know the prognosis. In general those need statements pertaining to information were identified as most important to families of cardiac surgery patients.

The findings of this study suggest that families of cardiac surgery patients have unique needs during the ICU stay and that nurses most often meet these needs. Many of these needs can be met very simply by the nurse by providing empathy and care to these families. It is the critical care nurse that is available and capable of meeting these unique family needs.

APPENDIX A

APPENDICES

APPENDIX A
CRITICAL CARE FAMILY NEEDS INVENTORY

I have heard and understood the description of this study and my rights as a subject. I further understand that the return of these data materials constitutes my informed consent to participate.

99

If this need
was met, by
whom was it
met?

- | | | | | | | |
|----|--|-------|-------|-------|-------|-------|
| 1. | To know the prognosis. | _____ | _____ | _____ | _____ | _____ |
| 2. | To have explanations of the environment before going into the critical care unit for the first time. | _____ | _____ | _____ | _____ | _____ |
| 3. | To talk to the doctor every day. | _____ | _____ | _____ | _____ | _____ |
| 4. | To have a specific person to call at the hospital when unable to visit. | _____ | _____ | _____ | _____ | _____ |
| 5. | To have questions answered honestly. | _____ | _____ | _____ | _____ | _____ |
| 6. | To have visiting hours changed for special conditions | _____ | _____ | _____ | _____ | _____ |
| 7. | To talk about negative feelings such as guilt or anger | _____ | _____ | _____ | _____ | _____ |
| 8. | To have good food available in the hospital | _____ | _____ | _____ | _____ | _____ |

In one of the first four columns, please check () how IMPORTANT each of the following needs is to you. If this need was met, please indicated by whom it was met in column # 5.

Slightly Important Very Important If this need was met, by whom was it met?

67

- | | | | | | |
|---|-------|-------|-------|-------|-------|
| 9. To have directions as to what to do at the bedside | _____ | _____ | _____ | _____ | _____ |
| 10. To visit at any time | _____ | _____ | _____ | _____ | _____ |
| 11. To know which staff members could give what type of information | _____ | _____ | _____ | _____ | _____ |
| 12. To have friends nearby for support | _____ | _____ | _____ | _____ | _____ |
| 13. To know why things were done for the patient | _____ | _____ | _____ | _____ | _____ |
| 14. To feel there is hope | _____ | _____ | _____ | _____ | _____ |
| 15. To know about the type of staff members taking care of the patient | _____ | _____ | _____ | _____ | _____ |
| 16. To know how the patient is being treated medically | _____ | _____ | _____ | _____ | _____ |
| 17. To be assured that the best care possible is being given to the patient | _____ | _____ | _____ | _____ | _____ |

In one of the first four columns, please check () how IMPORTANT each of the following needs is to you. If this need was met, please indicated by whom it was met in column # 5.

Slightly
Important

Important

Very
Important

If this need
was met, by
whom was it
met?

68

- | | | | | | |
|---|-------|-------|-------|-------|-------|
| 18. To have a place to be alone while in the hospital | _____ | _____ | _____ | _____ | _____ |
| 19. To know exactly what is being done for the patient | _____ | _____ | _____ | _____ | _____ |
| 20. To have comfortable furniture in the waiting room | _____ | _____ | _____ | _____ | _____ |
| 21. To feel accepted by the hospital staff | _____ | _____ | _____ | _____ | _____ |
| 22. To have someone to help with financial problems | _____ | _____ | _____ | _____ | _____ |
| 23. To have a telephone near the waiting room | _____ | _____ | _____ | _____ | _____ |
| 24. To have the pastor visit | _____ | _____ | _____ | _____ | _____ |
| 25. To talk about the possibility of the patient's death | _____ | _____ | _____ | _____ | _____ |
| 26. To have another person with the relative when visiting the critical care unit | _____ | _____ | _____ | _____ | _____ |

In one of the first four columns, please check () how IMPORTANT each of the following needs is to you. If this need was met, please indicated by whom it was met in column # 5.

	Not Important	Slightly Important	Important	Very Important	If this need was met, by whom was it met?
27. To have someone be concerned with the relative's health	_____	_____	_____	_____	_____
28. To be assured it is alright to leave the hospital for awhile	_____	_____	_____	_____	_____
29. To talk to the same nurse every day	_____	_____	_____	_____	_____
30. To be encouraged to cry	_____	_____	_____	_____	_____
31. To be told about other people that could help with problems	_____	_____	_____	_____	_____
32. To have a bathroom near the waiting room	_____	_____	_____	_____	_____
33. To be alone at any time	_____	_____	_____	_____	_____
34. To be told about someone to help with family problems	_____	_____	_____	_____	_____
35. To have explanations given that are understandable	_____	_____	_____	_____	_____

In one of the first four columns,
 please check () how IMPORTANT Not
 each of the following needs Important
 is to you. If this need was
 met, please indicated by whom
 it was met in column # 5.

Slightly
 Important

Important

Very
 Important

If this need
 was met, by
 whom was it
 met?

36. To have visiting hours start
 on time

37. To be told about chaplain
 services

38. To help with the patient's
 physical care

39. To be told about transfer
 plans while they are being
 made

40. To be called at home about
 changes in the patient's
 condition

41. To receive information about
 the patient once a day

42. To feel that the hospital
 personnel care about the
 patient

In one of the first four columns,
 please check () how IMPORTANT Not
 each of the following needs Important
 is to you. If this need was
 met, please indicated by whom
 it was met in column # 5.

Slightly
 Important Important Very
 Important

If this need
 was met, by
 whom was it
 met?

43. To know specific facts
 concerning the patient's
 progress

44. To see the patient frequently

45. To have the waiting room
 near the patient

46. Are there other needs you experienced but were not identified on this questionnaire?
 (Please list them).

APPENDIX B

APPENDIX B

FAMILY DEMOGRAPHIC FORM

Code # _____

Biographical Questions

Please place an X or check mark next to the proper response below.

Relationship to patient: Spouse _____
Daughter _____
Son _____
Son-in-law _____
Daughter-in-law _____

Gender: Male _____
Female _____

Are you educated in a medical field (nurse, physician, dentist, pharmacist)? yes _____ no _____

Have you ever visited a patient after open heart surgery prior to this time? _____ yes _____ no

Did you take the preoperative intensive care tour the night before surgery? _____ yes _____ no

Highest Educational Level

Grade school _____
Completed high school _____
Technical/apprenticeship _____
Associate degree _____
Baccalaureate degree _____
Master's degree _____
Doctoral degree _____

Additional Questions

What was the time between being told patient needed surgery and date surgery was performed _____ (days)

How old are you? _____ (years)

APPENDIX C

APPENDIX C

1383 Mulberry Lane
St. Joseph, MI 49085
(616) 429-9420
March 21, 1988

Michael Williams RN
1205 Woodbine
Lansing, MI 48910

Dear Michael,

You have my permission to reproduce the copyrighted need statements, Critical Care Family Needs Inventory, for investigational purposes as long as appropriate authorship, copyright, and permission is documented in your work. Please find enclosed a copy of the Critical Care Family Needs Inventory for your information. Either Nancy Molter or myself can grant you permission to use the tool. Your proposed study sounds excellent and certainly worth pursuing. Any suggestions you may have regarding the instrument will be appreciated. I wish you success in your nursing research endeavor. If I can be of any further help, do not hesitate to call or write.

Sincerely,

A black rectangular redaction box covering the signature of Jane Leske.

Jane Leske RN, MSN

APPENDIX D

APPENDIX D

PATIENT DEMOGRAPHIC FORM

Code # _____

Gender _____

Age _____

Surgical Procedure _____

Length of Surgery _____ (hours)

Complications _____

Is patient's spouse biological parent
of natural children? _____

Number of natural daughters _____

Number of natural sons _____

Number of son-in-laws _____

Number of daughter-in-laws _____

APPENDIX E

APPENDIX E
HANDOUT OF INFORMED CONSENT

This research is being conducted to determine family needs of cardiac surgery patients during the intensive care stay and by whom these needs are met. Your involvement will take approximately 45 minutes and is entirely voluntary. You may refuse to participate at any time before or during the study. Refusal to participate will in no way whatsoever affect the care of your loved one in the intensive care unit. Your responses will remain strictly confidential and anonymous.

Although no risks are anticipated, you may experience feelings during the questionnaire that you have not felt before. You may discuss these with the data collector. No physical risks are anticipated.

Any explanations you desire in relation to your rights as a study participant, the research itself or psychological related stress, may be addressed to the investigator, Michael L. Williams, R.N., at 334-2346 or 372-2327. Through your participation in this study, families of future cardiac surgery patients may be better assisted through their intensive care experience.

APPENDIX F

APPENDIX F
VERBAL SCRIPT

My name is _____ (researcher or trained assistant). I am conducting a study to find out the types of needs you have as a family member of a patient having cardiac surgery. I also want to find out if your needs are being met and, if so, by whom.

I will ask you to complete a questionnaire that will take approximately 45 minutes. This questionnaire includes a statement of consent, a variety of need statements and a form with additional information to help me better understand your responses. All of this information will remain confidential and anonymous. You may choose not to participate in this study. Please be assured that your loved one's care will not be affected in any way whatsoever if you choose not to participate.

Would you like to continue?

(If subject agrees to continue, continue with verbal script).

Please read over the handout regarding informed consent. If you choose not to participate in the study, simply turn in the questionnaire without completing it. Otherwise, please complete the questionnaire and information sheet to the best of your ability and return the forms to me.

APPENDIX G

APPENDIX G
DEMOGRAPHIC CHARACTERISTICS OF
THE SAMPLE

APPENDIX G

Distribution of Spouse by Age and Education

Class	N	Percentage
Ages 20-29	0	0
Ages 30-39	1	5
Ages 40-49	2	9
Ages 50-59	6	26
Ages 60-69	7	30
Ages 70-79	7	30
Completed grade school	3	13
Completed high school	13	57
Technical/apprenticeship	1	5
Associate degree	2	10
Baccalaureate degree	2	10
Master's degree	1	5
Doctoral degree	0	0

APPENDIX G (continued)

Distribution of Daughter by Age and Education

Class	N	Percentage
Ages 20-29	4	20
Ages 30-39	6	30
Ages 40-49	8	40
Ages 50-59	2	10
Ages 60-69	0	0
Ages 70-79	0	0
Completed grade school	0	0
Completed high school	13	65
Technical/apprenticeship	2	10
Associate degree	4	20
Baccalaureate degree	0	0
Master's degree	1	5
Doctoral degree	0	0

APPENDIX G (continued)

Distribution of Sons by Age and Education

Class	N	Percentage
Ages 20-29	4	44
Ages 30-39	2	22
Ages 40-49	2	22
Ages 50-59	1	12
Ages 60-69	0	0
Ages 70-79	0	0
Completed grade school	0	0
Completed high school	1	11
Technical/apprenticeship	2	22
Associate degree	4	44
Baccalaureate degree	2	22
Master's degree	0	0
Doctoral degree	0	0

APPENDIX G (continued)

Distribution of Daughters-in-law by Age and Education

Class	N	Percentage
Ages 20-29	2	22
Ages 30-39	2	22
Ages 40-49	3	33
Ages 50-59	2	22
Ages 60-69	0	0
Ages 70-79	0	0
Completed grade school	0	0
Completed high school	6	67
Technical/apprenticeship	1	11
Associate degree	1	11
Baccalaureate degree	0	0
Master's degree	1	11
Doctoral degree	0	0

APPENDIX G (continued)

* Distribution of Sons-in-law by Age and Education

Class	N	Percentage
Ages 20-29	1	33
Ages 30-39	0	0
Ages 40-49	1	33
Ages 50-59	1	33
Ages 60-69	0	0
Ages 70-79	0	0
Completed grade school	0	0
Completed high school	0	0
Technical/apprenticeship	2	67
Associate degree	0	0
Baccalaureate degree	1	33
Master's degree	0	0
Doctoral degree	0	0

APPENDIX G (continued)

Distribution of Patient Demographics

Class	N	Percentage
Single bypass	2	6
Double bypass	6	19
Triple bypass	13	42
Quadruple bypass	7	23
Aortic valve replacement	3	10
No complications	23	74
Bleeding post-op	1	3
Cerebrovascular accident	1	3
Hypotension	2	7
Acidosis	1	3
Arrhythmias	3	10
3.0-3.5 hours in OR	5	16
3.5-4.0 hours in OR	10	32
4.0-4.5 hours in OR	8	26
4.5-5.0 hours in OR	6	19
5.0-5.5 hours in OR	2	6

APPENDIX G (continued)

Selected Sample Demographics

	Spouse Responses (n=23)	Daughter's Responses (n=20)	Son's Responses (n=9)	Daughter- -in-law's Responses (n=9)	Son-in-law's Responses (n=3)
Mean age (years)	62	37	35	38	43
Educated in a medical field	4%	15%	0%	22%	0%
Completed high school	87%	100%	100%	100%	100%
Prior visit of open heart patient in an ICU	26%	10%	11%	0%	33%
Preoperative tour	91%	65%	78%	55%	100%
Time between being told of surgery & actual surgery (days)	10	8	9	9	3

APPENDIX H

APPENDIX H

Total Sample Responses to CCFNI

Code	R*	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13
01	1	4	3	3	3	4	4	3	3	3	3	3	4	4
01	2	4	4	3	4	4	4	4	2	4	4	4	3	3
01	2	4	4	4	3	4	3	3	2	3	4	3	3	4
01	4	4	4	4	4	4	4	4	4	3	4	3	3	3
02	1	4	4	4	4	4	3	3	4	4	3	4	4	4
02	3	4	4	4	4	4	3	4	4	4	3	4	3	4
02	5	4	4	4	4	4	4	4	4	4	3	4	3	4
03	1	4	4	4	4	4	4	3	4	4	3	4	4	4
03	5	4	4	3	4	4	4	3	3	3	3	4	4	4
04	1	4	4	3	0	4	3	0	1	3	4	2	4	4
04	2	4	4	3	4	4	1	1	2	4	4	3	4	4
05	1	4	4	3	4	4	4	2	3	4	4	4	4	4
05	2	4	4	4	4	4	4	2	4	4	4	4	2	4
06	1	4	4	3	3	4	4	2	4	3	4	3	3	3
07	1	4	4	4	4	4	3	1	4	4	3	3	4	3
07	2	4	4	4	4	4	4	4	4	4	3	4	3	4
07	3	4	4	3	3	4	4	3	3	3	4	3	3	4
08	2	4	4	3	4	4	4	0	1	3	3	4	3	4
09	1	4	2	3	4	4	4	2	4	2	3	2	3	3
10	2	4	3	1	3	4	4	3	1	1	4	3	2	4
10	3	4	4	4	3	4	4	1	1	1	4	1	4	4
11	1	4	3	4	3	4	3	2	3	3	3	3	3	3
11	2	4	4	4	4	4	3	4	3	4	1	4	4	4
11	2	4	4	4	3	4	3	4	3	4	4	3	3	4
11	2	4	4	3	3	4	2	2	4	3	3	4	4	4
11	4	4	3	4	3	4	2	1	2	3	3	3	2	2
12	1	4	4	4	4	4	3	4	4	4	4	4	4	4

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[illegible]

APPENDIX H (continued)

Total Sample Responses to CCFNI

Code	R	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13
24	5	4	4	4	4	4	4	4	4	4	4	4	4	4
25	1	4	3	4	3	4	1	1	0	3	3	3	3	4
25	2	4	4	4	4	4	1	1	3	1	4	2	3	4
26	2	4	4	3	1	4	4	3	1	3	4	2	3	3
26	5	4	4	4	4	4	3	2	2	4	3	3	4	3
27	1	4	4	3	4	4	4	3	3	3	4	4	4	0
28	1	4	4	3	4	4	0	2	3	4	4	0	1	3
29	2	4	4	1	3	4	2	1	3	3	1	3	3	3
29	4	4	4	2	3	4	2	2	4	3	2	3	3	4
30	1	4	3	3	1	4	2	3	3	3	3	3	4	4
31	1	4	4	4	3	4	3	3	3	4	4	4	4	4
31	3	4	4	3	4	4	4	3	3	3	4	4	3	4
N=		66	66	66	66	66	66	66	66	66	66	66	66	66
Mean=		3.88	3.65	3.16	3.26	3.89	3.03	2.35	2.82	3.16	3.11	3.18	3.15	3.62
S.D.		0.54	0.75	1.00	1.08	0.43	1.17	1.26	1.12	0.90	0.93	0.83	0.98	0.67

The Column Headings refer to question numbers on CCFNI.

APPENDIX H (continued)

Total Sample Responses to CCFNI

Code	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25	Q26
01	4	4	4	4	3	4	3	3	2	3	3	3	3
01	4	4	4	4	3	3	3	4	4	3	3	4	3
01	4	3	4	4	3	4	3	3	4	4	3	3	4
01	4	3	4	4	2	4	2	3	2	4	2	4	0
02	4	4	4	4	3	4	4	4	4	4	4	4	4
02	4	4	4	4	3	4	3	4	3	3	4	4	3
02	4	4	4	4	4	4	3	3	4	3	4	4	3
03	4	4	4	4	4	4	4	4	4	4	4	4	4
03	4	3	4	4	2	4	3	3	3	4	4	4	4
04	4	2	4	4	3	4	4	3	0	2	1	0	1
04	4	4	4	4	2	4	2	2	2	3	4	1	3
05	4	4	4	4	2	4	3	3	3	4	2	3	4
05	4	2	3	4	4	4	4	4	2	4	3	3	2
06	4	3	4	4	3	4	3	3	3	3	2	4	2
07	4	3	3	4	1	3	2	4	4	3	3	4	4
07	4	3	4	4	0	4	4	4	0	4	3	4	4
07	4	4	4	4	3	4	4	4	3	4	3	3	4
08	4	3	4	3	1	4	2	4	3	4	3	3	3
09	4	3	3	4	1	4	3	4	4	3	2	4	1
10	4	4	4	4	1	4	4	3	1	1	1	1	1
10	4	4	4	4	1	4	4	4	1	1	1	4	4
11	4	3	4	2	2	4	3	3	3	3	3	3	3
11	4	4	4	4	1	4	3	4	3	4	4	3	4
11	4	3	4	4	3	4	3	4	3	3	3	4	3
11	4	3	4	4	3	4	3	3	3	3	3	3	3
11	4	2	3	4	1	2	3	3	1	3	2	1	1
12	4	4	4	4	4	4	4	4	4	4	4	4	3

APPENDIX H (continued)

Total Sample Responses to CCFNI

Code	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25	Q26
12	4	4	4	4	1	4	3	4	0	4	0	0	0
13	4	4	3	4	2	3	3	3	0	3	0	0	3
14	3	3	3	3	4	3	3	3	3	3	3	3	4
14	4	4	4	4	2	4	3	4	2	2	4	4	2
14	4	3	4	4	3	4	3	3	3	3	3	4	3
15	3	3	3	4	2	3	3	3	2	3	4	3	2
15	3	3	4	4	1	4	2	3	1	4	1	1	1
16	4	4	3	3	3	3	3	3	3	3	3	3	2
16	4	4	4	4	4	4	4	4	4	4	3	3	4
16	4	3	4	4	3	4	3	3	4	3	2	3	3
17	4	4	4	4	3	4	4	4	3	4	3	3	1
17	4	3	4	4	2	4	3	4	4	3	2	4	1
17	4	3	4	4	1	4	2	3	1	4	2	3	4
18	4	4	4	4	3	4	2	4	3	4	3	3	3
18	4	4	3	4	2	4	3	4	4	4	2	4	1
18	4	3	4	4	2	4	3	2	2	3	3	2	1
18	3	3	4	4	2	4	3	3	3	3	3	3	4
19	0	1	3	3	2	3	3	3	2	2	3	0	2
19	4	3	4	4	1	4	3	3	1	3	2	1	1
20	4	3	4	4	2	4	3	3	0	3	3	0	4
21	3	2	3	3	2	3	1	3	3	3	2	3	3
21	3	3	3	3	1	3	2	3	2	2	3	3	1
22	4	4	4	4	4	4	4	4	1	4	4	4	1
23	4	1	4	4	3	4	2	3	1	2	3	3	3
23	4	4	3	4	2	4	3	4	1	4	2	2	3
24	4	4	4	4	3	4	4	4	4	4	4	4	4
24	4	4	4	4	3	4	4	4	4	4	4	4	4

APPENDIX H (continued)

Total Sample Responses to CCFNI

Code	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25	Q26
24	4	4	4	4	4	4	4	4	4	4	4	4	4
25	4	4	4	4	3	3	2	3	2	4	4	2	4
25	4	2	4	4	1	4	2	4	4	3	4	4	4
26	2	2	3	4	2	4	2	1	1	2	2	4	1
26	4	2	3	4	2	3	3	3	4	2	3	4	1
27	0	4	4	4	3	0	3	4	4	4	4	3	3
28	4	4	4	4	2	4	3	4	0	3	3	2	4
29	3	2	3	3	2	3	2	2	2	3	4	2	2
29	3	2	4	4	3	3	3	2	2	3	4	3	4
30	4	3	4	4	2	4	2	4	4	1	4	3	3
31	4	4	4	4	4	4	4	4	4	3	3	4	4
31	4	3	3	4	4	3	4	3	3	4	2	4	3
Mean=	3.73	3.26	3.74	3.86	2.40	3.70	3.01	3.38	2.54	3.21	2.88	2.95	2.73
S.D.	0.77	0.81	0.44	0.38	1.02	0.65	0.73	0.67	1.31	0.81	1.01	1.22	1.23

The Column Headings refer to question numbers on CCFNI.

APPENDIX H (continued)

Total Sample Responses to CCFNI

Code	Q27	Q28	Q29	Q30	Q31	Q32	Q33	Q34	Q35	Q36	Q37	Q38	Q39
01	3	3	4	2	3	3	3	3	3	3	3	3	3
01	4	3	4	4	4	4	3	2	4	3	2	4	4
01	3	2	3	3	3	3	3	2	4	2	2	4	4
01	4	3	2	3	3	3	3	3	3	4	2	4	4
02	4	4	1	4	2	4	1	4	4	4	1	4	4
02	4	3	1	2	3	4	3	3	4	3	3	3	4
02	4	3	1	2	3	4	2	3	4	4	4	4	4
03	4	4	4	4	4	4	3	4	4	4	4	4	4
03	4	4	4	2	3	4	3	3	4	4	3	2	4
04	4	3	2	0	2	2	1	1	4	1	1	2	3
04	3	3	4	2	3	2	3	3	4	2	3	0	3
05	2	4	4	2	3	4	1	1	4	4	1	4	4
05	2	3	4	3	2	3	1	2	4	4	3	4	4
06	3	4	3	2	3	3	3	3	4	2	2	4	3
07	3	4	3	1	4	3	1	2	3	2	3	3	4
07	4	4	4	4	0	4	3	0	4	0	0	4	4
07	3	4	3	2	4	4	3	3	4	4	3	3	4
08	4	3	3	2	3	4	2	3	3	3	3	4	4
09	2	3	1	1	3	3	2	3	4	4	2	4	3
10	4	4	3	2	2	4	1	1	4	3	1	1	4
10	4	4	1	1	3	4	1	1	4	1	1	1	4
11	3	3	4	3	3	3	3	3	4	3	3	3	3
11	4	4	2	1	3	4	3	3	4	4	4	4	4
11	4	4	3	4	4	3	4	4	4	4	4	4	4
11	3	4	4	3	3	4	3	3	4	3	3	4	4
11	4	3	2	1	1	3	1	1	4	4	2	2	3
12	4	4	4	4	4	4	3	4	4	4	4	4	4

APPENDIX H (continued)

Total Sample Responses to CCFNI

Code	Q27	Q28	Q29	Q30	Q31	Q32	Q33	Q34	Q35	Q36	Q37	Q38	Q39
12	0	4	1	0	0	4	0	0	4	0	0	4	0
13	3	3	3	0	3	4	2	0	4	4	0	4	3
14	0	4	3	1	0	3	0	3	3	2	0	3	3
14	3	4	3	3	3	4	2	3	4	3	2	4	4
14	3	3	3	3	3	4	3	3	3	3	2	3	4
15	3	4	3	2	3	3	3	2	3	3	3	3	4
15	1	3	3	1	1	4	1	1	3	3	1	1	4
16	2	3	3	3	3	3	1	2	3	3	2	3	3
16	4	4	4	4	4	4	4	4	4	4	4	4	4
16	4	4	3	3	4	4	2	3	4	3	2	3	3
17	4	4	3	1	3	4	2	3	4	4	3	4	4
17	3	3	1	1	4	3	1	3	4	3	2	3	3
17	4	4	4	1	1	4	1	0	4	4	1	4	4
18	4	3	3	2	3	3	2	3	4	3	2	3	3
18	4	3	1	2	4	3	2	3	4	2	2	4	3
18	4	2	3	1	2	3	2	2	4	3	3	3	3
18	3	4	2	3	3	3	3	3	3	3	3	4	4
19	3	3	1	1	2	2	1	0	2	1	1	2	3
19	4	3	4	1	1	3	1	1	4	1	1	4	1
20	4	4	3	0	2	2	2	0	4	2	1	4	4
21	3	3	1	2	3	3	3	2	3	2	2	3	2
21	3	2	1	2	2	2	1	2	3	3	3	3	3
22	4	4	4	4	4	4	4	4	4	4	4	4	4
23	2	3	3	1	2	4	2	1	4	2	3	3	3
23	4	4	3	2	2	4	1	1	4	3	1	3	4
24	4	4	4	2	4	4	4	3	4	4	3	4	4
24	4	4	4	2	4	4	4	3	4	4	3	4	4

APPENDIX H (continued)

Total Sample Responses to CCFNI

Code	Q27	Q28	Q29	Q30	Q31	Q32	Q33	Q34	Q35	Q36	Q37	Q38	Q39
24	4	4	4	4	4	4	4	4	4	4	4	4	4
25	4	3	4	2	3	3	2	1	3	2	3	3	3
25	4	4	1	1	2	4	1	2	4	1	4	2	4
26	3	1	2	1	2	1	2	1	4	3	3	3	4
26	4	4	2	1	4	3	1	4	4	3	3	3	2
27	4	3	4	3	4	4	3	3	4	3	4	4	4
28	4	2	3	3	3	3	2	0	4	2	3	4	4
29	2	3	2	1	2	4	2	2	3	3	2	1	3
29	2	3	2	1	2	4	2	2	4	2	2	1	3
30	3	3	4	2	2	2	1	2	3	1	2	1	3
31	4	4	4	1	3	3	2	3	4	3	3	3	4
31	3	3	3	3	3	3	3	3	4	3	3	3	4
N=	66	66	66	66	66	66	66	66	66	66	66	66	66
Mean=	3.32	3.40	2.83	2.04	2.76	3.39	2.15	2.27	3.74	2.86	2.38	3.18	3.50
S.D.=	0.95	0.67	1.09	1.14	1.04	0.72	1.04	1.20	0.47	1.06	1.12	1.02	0.77

The Column Headings refer to question numbers on CCFNI.

APPENDIX H (continued)

Total Sample Responses to CCFNI

Code	Q40	Q41	Q42	Q43	Q44	Q45
01	3	3	3	4	4	3
01	4	4	4	4	4	3
01	4	4	4	4	4	4
01	3	4	4	4	4	4
02	4	4	4	4	4	3
02	4	4	4	4	4	3
02	4	4	4	4	4	2
03	4	4	4	4	4	4
03	4	3	4	4	4	4
04	4	0	4	4	3	4
04	3	3	3	3	3	4
05	4	4	4	4	4	4
05	4	4	4	4	4	4
06	4	4	4	4	4	3
07	1	3	4	3	4	4
07	4	4	4	4	4	4
07	4	4	4	4	4	4
08	4	4	4	4	4	4
09	4	4	4	4	4	3
10	4	4	4	3	3	4
10	4	4	4	4	4	1
11	4	3	3	3	3	4
11	4	4	4	4	3	4
11	4	4	4	4	4	3
11	4	4	3	4	4	4
11	4	4	4	4	4	3
12	4	4	4	4	4	4

APPENDIX H (continued)

Total Sample Responses to CCFNI

Code	Q40	Q41	Q42	Q43	Q44	Q45
12	0	4	4	4	4	4
13	4	4	4	3	3	3
14	3	3	3	3	3	4
14	4	4	4	4	4	4
14	4	3	3	3	3	3
15	4	4	4	4	4	4
15	4	4	4	3	3	4
16	4	4	4	4	4	4
16	4	4	4	4	4	4
16	4	4	4	4	4	4
17	4	4	4	4	4	4
17	4	4	4	4	4	4
17	4	4	4	4	4	4
18	4	4	4	4	4	4
18	4	4	4	3	3	4
18	4	4	4	4	4	3
18	4	4	4	4	0	4
19	3	1	1	1	3	2
19	4	3	4	4	4	4
20	4	4	4	4	4	4
21	3	3	3	3	2	1
21	3	3	3	3	2	3
22	4	4	4	4	4	4
23	4	4	4	4	3	2
23	4	4	4	4	4	4
24	4	4	4	4	4	4
24	4	4	4	4	4	4

APPENDIX H (continued)

Total Sample Responses to CCFNI

Code	Q40	Q41	Q42	Q43	Q44	Q45
24	4	4	4	4	4	4
25	3	4	4	4	4	4
25	4	3	4	4	4	4
26	3	3	4	4	4	2
26	4	3	4	3	4	4
27	4	4	4	4	4	0
28	4	4	4	4	4	4
29	3	2	4	4	4	4
29	4	2	4	4	3	2
30	4	4	4	4	4	3
31	4	4	4	4	4	4
31	4	3	4	4	4	4
N=	66	66	66	22	66	66
Mean=	3.74	3.62	3.83	3.77	3.68	3.50
S.D.	0.69	0.76	0.48	0.52	0.68	0.88

The Column Headings refer to question numbers on CCFNI.

* Denotes relationship to patient; "1" is the spouse, "2" is a daughter, "3" is a son, "4" is a son-in-law and "5" is a daughter-in-law.

APPENDIX I

APPENDIX I

Need Statement	<u>Identified Persons Meeting Family Needs</u>				
	Nurse N (%)	Doctor N (%)	Clergy N (%)	Family N (%)	Total N (%)
1. To know the prognosis.	18 (30)	38 (63)	1 (2)	2 (3)	60 (100)*
2. To have explanations of the environment before going into the critical care unit for the first time.	41 (82)	4 (8)	3 (6)	2 (4)	50 (100)
3. To talk to the doctor every day.	1 (10)	8 (80)		1 (10)	10 (100)
4. To have a specific person to call at the hospital when unable to visit.	19 (79)			2 (8)	24 (100)*
5. To have questions answered honestly.	27 (49)	23 (42)	4 (7)		55 (100)*
6. To have visiting hours changed for special conditions	9 (60)	3 (20)	2 (13)		15 (100)*
7. To talk about negative feelings such as guilt or anger	3 (60)			2 (40)	5 (100)*

* "Other" identified as meeting remaining needs.

** "Other" identified as meeting this need 100% of the time.

APPENDIX I (continued)

Identified Persons Meeting Family Needs

Need Statement	Nurse N (%)	Doctor N (%)	Clergy N (%)	Family N (%)	Total N (%)
8. To have good food available in the hospital					8 (100)**
9. To have directions as to what to do at the bedside	20 (80)	3 (12)	1 (4)		25 (100)*
10. To visit at any time.	10 (53)	5 (26)	3 (16)		19 (100)*
11. To know which staff members could give what type of information	8 (44)	6 (33)	3 (17)		18 (100)*
12. To have friends nearby for support	2 (13.3)			9 (60)	15 (99.9)*
13. To know why things were done for the patient	32 (58)	17 (31)	5 (9)	1 (2)	55 (100)*
14. To feel there is hope	20 (50)	14 (35)	5 (13)	1 (2)	40 (100)*
15. To know about the type of staff members taking care of the patient	6 (50)	3 (25)	1 (8.3)	1 (8.3)	12 (99.9)*

* "Other" identified as meeting remaining needs.

** "Other" identified as meeting this need 100% of the time.

APPENDIX I (continued)

Identified Persons Meeting Family Needs

Need Statement	Nurse N (%)	Doctor N (%)	Clergy N (%)	Family N (%)	Total N (%)
16. To know how the patient is being treated medically	22 (52)	15 (36)	5 (12)		42 (100)*
17. To be assured that the best care possible is being given to the patient	20 (57)	10 (29)	4 (11)	1 (3)	35 (100)*
18. To have a place to be alone while in the hospital					2 (100)**
19. To know exactly what is being done for the patient	24 (60)	11 (28)	5 (12)		40 (100)
20. To have comfortable furniture in the waiting room					3 (100)**
21. To feel accepted by the hospital staff	9 (43)	7 (33)	4 (19)		21 (100)*
* "Other" identified as meeting remaining needs.					
** "Other" identified as meeting this need 100% of the time.					

APPENDIX I (continued)

Identified Persons Meeting Family Needs

Need Statement	Nurse N (%)	Doctor N (%)	Clergy N (%)	Family N (%)	Total N (%)
22. To have someone to help with financial problems	1 (25)	1 (25)	1 (25)		4 (100)*
23. To have a telephone near the waiting room	3 (38)	1 (12.5)	1 (12.5)		8 (100)*
24. To have the pastor visit	11 (92)				12 (100)*
100 25. To talk about the possibility of the patient's death	2 (13.5)	10 (66)		2 (13.5)	15 (100)*
26. To have another person with the relative when visiting the critical care unit	2 (25)			5 (63)	8 (100)*
27. To have someone be concerned with the relative's health	13 (48)	6 (22)	3 (11)	4 (15)	27 (100)*
28. To be assured it is alright to leave the hospital for awhile	12 (71)	2 (11)	2 (11)		17 (100)*

* "Other" identified as meeting remaining needs.

** "Other" identified as meeting this need 100% of the time.

APPENDIX I (continued)

Identified Persons Meeting Family Needs

Need Statement	Nurse	Doctor	Clergy	Family	Total
	N (%)	N (%)	N (%)	N (%)	N (%)
29. To talk to the same nurse every day	6 (60)	2 (20)	2 (20)		10 (100)
30. To be encouraged to cry	1 (100)				1 (100)
31. To be told about other people that could help with problems	1 (25)	1 (25)	1 (25)		4 (100)*
101 32. To have a bathroom near the waiting room	1 (33.3)	1 (33.3)	1 (33.3)		3 (99.9)
33. To be alone at any time					2 (100)**
34. To be told about someone to help with family problems	1 (100)				1 (100)
35. To have directions that are understandable	23 (55)	15 (36)	4 (9)		42 (100)
36. To have visiting hours start on time	1 (100)				1 (100)

* "Other" identified as meeting remaining needs.

** "Other" identified as meeting this need 100% of the time.

APPENDIX I (continued)

Identified Persons Meeting Family Needs

Need Statement	Nurse N (%)	Doctor N (%)	Clergy N (%)	Family N (%)	Total N (%)
37. To be told about chaplain services					0 (0)
38. To help with the patient's physical care	4 (67)	1 (17)	1 (16)		6 (100)
39. To be told about transfer plans while they are being made	7 (70)	2 (20)	1 (20)		10 (100)
40. To be called at home about changes in the patient's condition				1 (33.3)	3 (99.9)*
41. To receive information about the patient once a day	7 (41)	6 (35)	2 (12)	2 (12)	17 (100)
42. To feel that the hospital personnel care about the patient	18 (49)	13 (35)	6 (16)		37 (100)

* "Other" identified as meeting remaining needs.

** "Other" identified as meeting this need 100% of the time.

APPENDIX I (continued)

Identified Persons Meeting Family Needs

Need Statement	Nurse N (%)	Doctor N (%)	Clergy N (%)	Family N (%)	Total N (%)
43. To know specific facts concerning the patient's progress	17 (61)	8 (29)	2 (7)	1 (3)	28 (100)
44. To see the patient frequently	6 (46)	4 (31)	3 (23)		13 (100)
45. To have the waiting room near the patient					1 (100)*

103

* "Other" identified as meeting remaining needs.

** "Other" identified as meeting this need 100% of the time.

APPENDIX J

APPENDIX J

Comparison of Spouse and Children's Medians for Each Need Statement Mann Whitney z Value

NEEDS	Mann Whitney z Value
1. To know the prognosis	2.187*
2. To have explanations of the environment before going into the critical care unit for the first time	1.929*
3. To talk to the doctor everyday	1.711*
4. To have a specific person to call at the hospital when unable to visit	1.097
5. To have questions answered honestly	1.890*
6. To have visiting hours changed for special conditions	1.361
7. To talk about negative feelings such as guilt or anger	1.163
8. To have good food available in the hospital	-.8526
9. To have directions as to what to do at the bedside	-.2379

APPENDIX J (continued)

Comparison of Spouse and Children's Medians for Each Need Statement Mann Whitney z Value

NEEDS	Mann Whitney z Value
10. To visit at any time	.9583
11. To know which staff members could give what type of information	1.083
12. To have friends nearby for support	-.0594
13. To know why things were done for the patient	1.348
14. To feel there is hope	.5816
15. To know about the types of staff members taking care of the patient	.2908
16. To know how the patient is being treated medically	3.304
17. To be assured the best care possible is being given to the patient	.3502
18. To have a place to be alone while in the hospital	-.9120

APPENDIX J (continued)

Comparison of Spouse and Children's Medians for Each Need Statement Mann Whitney z Value

NEEDS	Mann Whitney z Value
19. To know exactly what is being done for the patient	1.189
20. To have comfortable furniture in the waiting room	.6014
21. To feel accepted by the hospital staff	-.4296
22. To have someone to help with financial problems	-.6411
23. To have a telephone near the waiting room	.9253
24. To have the pastor visit	-.6080
25. To talk about the possibility of the patient's death	.8327
26. To have another person with the relative when visiting the critical care unit	-.7534
27. To have someone be concerned with the relative's health	1.103

APPENDIX J (continued)

Comparison of Spouse and Children's Medians for Each Need Statement Mann Whitney z Value

NEEDS	Mann Whitney z Value
28. To be assured it is alright to leave the hospital for awhile	.2445
29. To talk to the same nurse every day	-.4957
30. To be encouraged to cry	.3635
31. To be told about other people that could help with problems	1.077
32. To have a bathroom near the waiting room	2.604*
33. To be alone at any time	.8125
34. To be told about someone to help with family problems	.8195
35. To have explanations given that are understandable	1.956*
36. To have visiting hours start on time	1.216
37. To be told about chaplain services	.3238

APPENDIX J (continued)

Comparison of Spouse and Children's Medians for Each Need Statement Mann Whitney z Value

NEEDS	Mann Whitney z Value
38. To help with the patient's physical care	.6939
39. To be told about transfer plans while they are being made	1.546
40. To be called at home about changes in the patients condition	.6939
41. To receive information about the patient once a day	.2115
42. To feel that the hospital personnel care about the patient	.8526
43. To know specific facts concerning the patient's progress	.8988
44. To see the patient frequently	.7732
45. To have the waiting room near the patient	.9517

* Significant at the 5% level if > 1.58

**Significant at the 1% level if > 2.58

APPENDIX K

APPENDIX K

Comparison of Females and Males Medians for Each Need Statement with Mann Whitney z Value

NEEDS	Mann Whitney z Value
1. To know the prognosis	.2108
2. To have explanations of the environment before going into the critical care unit for the first time	.2448
3. To talk to the doctor everyday	.1428
4. To have a specific person to call at the hospital when unable to visit	1.605*
5. To have questions answered honestly	.5304
6. To have visiting hours changed for special conditions	.9181
7. To talk about negative feelings such as guilt or anger	1.945*
8. To have good food available in the hospital	.8501
9. To have directions as to what to do at the bedside	1.985*

APPENDIX K (continued)

Comparison of Females and Males Medians for
Each Need Statement with Mann Whitney z Value

	NEEDS	Mann Whitney z Value
	10. To visit at any time	-.0272
	11. To know which staff members could give what type of information	1.720*
	12. To have friends nearby for support	.2584
	13. To know why things were done for the patient	.3060
	14. To feel there is hope	.6053
	15. To know about the types of staff members taking care of the patient	.4352
	16. To know how the patient is being treated medically	.3060
	17. To be assured the best care possible is being given to the patient	.6529
	18. To have a place to be alone while in the hospital	.2856
	19. To know exactly what is being done for the patient	.8977

APPENDIX K (continued)

Comparison of Females and Males Medians for Each Need Statement with Mann Whitney z Value

111	NEEDS	Mann Whitney z Value
	20. To have comfortable furniture in the waiting room	.2040
	21. To feel accepted by the hospital staff	.5985
	22. To have someone to help with financial problems	.8909
	23. To have a telephone near the waiting room	.4828
	24. To have the pastor visit	1.231
	25. To talk about the possibility of the patient's death	.4284
	26. To have another person with the relative when visiting the critical care unit	.6529
	27. To have someone be concerned with the relative's health	.8433
	28. To be assured it is alright to leave the hospital for awhile	1.197

APPENDIX K (continued)

Comparison of Females and Males Medians for Each Need Statement with Mann Whitney z Value

112

NEEDS	Mann Whitney z Value
29. To talk to the same nurse every day	1.537
30. To be encouraged to cry	2.121*
31. To be told about other people that could help with problems	.9929
32. To have a bathroom near the waiting room	1.108
33. To be alone at any time	1.067
34. To be told about someone to help with family problems	1.067
35. To have explanations given that are understandable	1.394
36. To have visiting hours start on time	2.101*
37. To be told about chaplain services	1.047
38. To help with the patient's physical care	2.353*

APPENDIX K (continued)

Comparison of Females and Males Medians for Each Need Statement with Mann Whitney z Value

NEEDS	Mann Whitney z Value
39. To be told about transfer plans while they are being made	2.257*
40. To be called at home about changes in the patients condition	2.074*
41. To receive information about the patient once a day	.8297
42. To feel that the hospital personnel care about the patient	-.4080
43. To know specific facts concerning the patient's progress	.0408
44. To see the patient frequently	-.0204
45. To have the waiting room near the patient	.4964

*Significant at the 5% level if > 1.58

**Significant at the 1% level if > 2.58

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