

FAMILY PRESENCE DURING CARDIOPULMONARY RESUSCITATION:
THE IMPACT OF EDUCATION ON PROVIDER ATTITUDES

By

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Abstract

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Although many institutions embrace a family-centered model of patient care, the majority of acute care facilities have not developed policies or guidelines to facilitate family presence during cardiopulmonary resuscitation. Results of research conducted over the past two decades have shown that the personal beliefs and attitudes of hospital personnel involved in resuscitation efforts are the primary reasons family presence is not offered. This before-after correlational study tested the impact of education, using evidence-based information, on the attitudes of acute care providers toward offering the option of family witnessed resuscitation (FWR). By surveying all acute-care nursing and medical personnel about the topic in a non-academic hospital setting, this study provides data missing from previous research. Study results show that when CPR providers are presented with FWR education, their oppositional beliefs may be modified, decreasing barriers to family witnessed resuscitation. These findings may be helpful in a variety of hospital systems, leading to greater acceptance of family presence during resuscitation as a standard of practice in acute-care settings.

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CHAPTER ONE

INTRODUCTION and BACKGROUND

Although many institutions embrace a family-centered model of patient care, the majority of acute care facilities have not developed policies or guidelines to facilitate family presence during cardiopulmonary resuscitation. Research conducted over the past two decades has shown that the personal beliefs and attitudes of hospital personnel involved in resuscitation efforts are the primary reasons family presence is not offered. This before-after correlational study tested the influence of a hospital-based education program on acute care providers' attitudes toward family presence during cardiopulmonary resuscitation. Teaching and leadership strategies were based upon Lewin's Change Theory, and addressed common provider concerns using evidence-based information. Study results show that by using these techniques, the oppositional beliefs of providers may be modified, decreasing barriers to family witnessed resuscitation.

Background

The expectation that an individual's family would be present throughout the continuum of life was altered with the advent of institutionalized medicine in the early 20th century. Birth, illness, and death became increasingly attended by physicians and nurses rather than loved ones. However, over the past forty years demands for self-determination and attention to consumer preferences have caused the healthcare community to rethink many traditional practices, including those that exclude families from participating in life's most celebrated, stressful, or sorrowful events. Acute care institutions have been the venue for this interface between the health and social sectors.

In response to expectations that patients be recognized and treated as members of family units, and that families be considered essential members of the patient care team, many practices have been revised, such as parental visitation practices in pediatric units (Ahmann, Abraham, & Johnson, 2004), and the control of the labor and delivery experience (Phillips, 1999). Others, such as family presence in traditionally restricted critical care areas, are being examined for their relevance and acceptability (Ahmann, Abraham, & Johnson). In response to societal expectations, the definition of family has also undergone change. Many institutions have adopted a definition that includes any group or person with whom the patient has established a significant emotional relationship (American Association of Critical Care Nurses, 2005; Emergency Nurses Association, 2007; Medalie & Cole-Kelly, 2002).

The challenge for healthcare leaders has not been in designing new conceptual models of patient care to meet the evolving needs of patients and their families, but in implementing practices that actualize those models. Family-centered care is one model of practice that is commonly used to express commitment to customer service and care excellence. The goal of family-centered care is to re-shape healthcare policies, programs, facility design, and relationships among healthcare professionals, patients, and families (Knapp & Mulligan-Smith, 2005). To do so, outdated rules and regulations that previously benefited the organization, rather than patients and families, must be re-evaluated (Henneman, 2002). At the fulcrum of this model are policies that demonstrate regard for patient-family relationships, while supporting the legal rights and physical safety of both patients and their healthcare providers.

The earliest challenges to restrictive hospital practices occurred in maternity and pediatric settings in the 1970s. The first model for hospital-based childbirth was based on the science of medicine, using an illness model of physician-managed care. This model focused on asepsis, pain relief, safe delivery, and standardized nursing care (Phillips, 1999). Practices that restricted access to the newborn resulted in improved maternal and infant survival, but limited maternal contact to feeding times and kept families and friends, considered sources of infection, out of the hospital. By the 1940s, the psychological impact of infant-maternal separation was recognized, initiating a 30-year transformation of hospital-based childbirth from a sterile, amnesiac, isolated experience to a family-centered event where physicians and nurses assist, but do not direct, women and their families (Phillips). Since the late 1970s when they were first welcomed into the delivery room, the role of the father has evolved from being a mere witness to being a functional participant. Women make autonomous decisions about who else they would like present during labor and delivery, including other children, close relatives, and companions. Other advances in family-centered maternity care have included the advent of infant rooming-in, with the nursery assuming the role of a respite unit rather than a primary care area (Phillips).

A similar pattern of change occurred in hospital pediatric settings. Children in the first half of the 20th century suffered forced separation from their parents during hospitalization. Responding to research in the 1950s that showed the detrimental effects of this practice, some hospitals relaxed their visitation hours, allowing a gradual increase in the time mothers could visit their children. Observations of the beneficial effect of

maternal presence, along with the social movements of the 1960s and 1970s, led to the current trend of allowing 24-hour parental presence in most general pediatric units (Ahmann, Abraham & Johnson, 2004; American Academy of Pediatrics, 2003).

Emergency rooms were the first to advocate for family presence for both adult and pediatric patients, and routinely accept family members in treatment areas. Unlike maternity, pediatric, and emergency care, the presence of family in adult critical care units has not been readily accepted by healthcare providers (Daniels, 1996). The traditional Intensive Care Unit (ICU) has been strictly patient-focused, with visitation policies that severely limit family access to critically-ill patients (Fontaine, 2001). Within the past decade, patient-focused care has been extended to include families by acknowledging the role of the critically-ill patient within a family system (American Association of Critical Care Nurses, 2000). According to Fontaine (2001), a holistic approach to critical care includes attention to sensory stimulation and sleep needs, and includes open, patient-controlled visitation as a tenet of humanistic care.

One of the most controversial topics in the acute care setting is whether to further extend family-centered care to include family presence during cardiopulmonary resuscitation (CPR), also termed family witnessed resuscitation (FWR). Family presence at the end of life is widely accepted in acute care settings, when the priority of care shifts from physical cure of the patient to the social, spiritual and emotional well-being of the patient and of their family members. However, when a patient experiences a life-threatening event such as respiratory or cardiac arrest, families have traditionally been prohibited from remaining in the care area.

The movement toward FWR as an extension of family-centered care has been fraught with controversy. The benefits of promoting family connectedness in crises, as described by patients, families, and care providers, is the foundation of FWR advocacy. The fear of medicolegal risks, potential negative impact on patient outcomes, concerns about the psychological well-being of family members, and the personal discomfort of providers are cited by opponents of FWR. All of these viewpoints must be considered, and have been examined over the past 20 years from a research-based perspective. Results from these studies have led to an international movement to include FWR as an extension of family-centered care.

Problem Statement

Numerous professional healthcare organizations (Emergency Nurses Association (2005), the American Association of Critical Care Nurses (2004), the American College of Critical Care Medicine (2007), American Academy of Pediatrics Committee on Pediatric Emergency Medicine, American College of Emergency Medicine (2006), and the American Heart Association (2005)) have recommended that families be offered the option of being present during cardiopulmonary resuscitation and invasive procedures. Despite these recommendations and the movement toward family-centered care, an overwhelming majority of acute care facilities in the U.S. have not developed policies or guidelines to facilitate family presence during cardiopulmonary resuscitation. In a 2003 survey of 984 U.S. hospitals, only 5% had policies addressing FWR (McLean, Guzzetta, White, Fontaine, Eichhorn, & Meyers, et al., 2003).

National acceptance of family presence during cardiopulmonary resuscitation as a

standard of care may occur as more institutions successfully implement guidelines or policies. The success of adopting family presence guidelines is likely to be greater if healthcare providers are presented with evidence and ethical reasoning that address common provider concerns about having family members witness resuscitation. These concerns have been described in numerous survey studies examining the opinions and beliefs of adult and pediatric acute care, critical care, and emergency care professionals.

The Emergency Nurses Association (2007) cites several studies involving more than 4,000 U.S. healthcare providers from various backgrounds, who provided their opinions when asked about the hypothetical presence of families during invasive procedures and/or resuscitation. Subjects included members of professional organizations, attendees at medical conferences, and hospital-based pediatric and adult critical care and emergency personnel. Generally, these studies show that less than half of the respondents would favor family presence during resuscitation. More nurses than physicians favor the practice, and experienced acute-care physicians tend to favor FWR more than physicians in resident training or outpatient settings. Providers with experience in pediatric emergency and critical care are more likely to advocate for FWR than adult emergency and critical care physicians (Emergency Nurses Association).

A lack of previous experience with FWR has been identified as the primary detrimental factor for supporting family witnessed care. Of providers who have participated in events with family presence, 72% - 93% support the practice during invasive procedures, and 63% - 86% during resuscitation (Emergency Nurses Association, 2007). Factors shown to improve support of FWR include having a

structured guideline or policy (Duran, Oman, Abel, Koziel, & Szymanski, 2007; McLean, et al., 2003), having a dedicated family support person to guide the family member through the experience (Meyers, Eichhorn, Guzzetta, Clark, Klein, Taliaferro, et al., 2000), and providing education about family presence to hospital personnel (Ellison, 2003).

One of the most commonly cited fears of resuscitation team members is that family presence may disrupt patient care or negatively effect patient outcome. Of over 600 family presence events evaluated in several studies, none documented direct interference, or interference in the ability of the resuscitation team to function effectively (Emergency Nurses Association, 2007). Another barrier stems from concern that family members may be emotionally traumatized by witnessing the resuscitation experience (Belanger & Reed, 1997; Duran, et al., 2007; Ellison, 2003; MacLean, et al.; McClenathan, Torrington, & Uyehara, 2002; Meyers, et al., 2000; Mian, Warchal, Whitney, Fitzmaurice, & Tancredi, 2007). Numerous retrospective, qualitative studies show that although the experience can be frightful, and some family members felt unprepared for what they witnessed, an overwhelming majority would choose to be present again in the same situation, and believe families should be given the opportunity to make that choice (Doyle, et al., 1987; Meyers, et al, 2000).

Qualitative interviews and observational studies with bereaved family members, surviving patients, and experienced healthcare providers show that FWR provides many beneficial advantages over traditional exclusion practices. Family members describe a fulfilled need of emotional and spiritual presence (Meyers, et al., 2000), better

comprehension of the patient's condition (Duran, et al. 2007; Meyers, et al., 2000), knowledge of the team's full efforts, and fewer psychological difficulties during the bereavement period (Duran, et al; Hanson & Strawser, 1992; Meyer, et al, 2000; Robinson, 1998). In a study by Ellison (2003), nurses who supported FWR reported that through FWR they were able to advocate for the family, to obtain helpful medical information from them, to meet the family member's need for information and solace, to allow them to see that all is done, to assist with end-of-life decisions based on quality-of-life information, and to facilitate the grieving process.

Current recommendations by professional organizations for instituting FWR practices arise from the results of what the Emergency Nurses Association (2007) terms "what if it were me" surveys, and other studies based on actual family experiences. These studies show that provider concerns, which create barriers to FWR, are not evidence based, while the same studies show multiple benefits to offering the option of family presence during resuscitation.

Charged with the responsibility to educate and inform all healthcare personnel about changes and achievements in lifesaving interventions, procedures, or standards of care, members of this study facility's code committee examined the evidence surrounding FWR, and chose to pursue development of a guideline based upon the research findings and published recommendations. Due to the controversial nature of the FWR concept, it was understood that ensuring support of the concept by CPR providers would require examination of current provider attitudes about FWR, and a planned approach for staff education. Missing from the literature were studies that demonstrated effective strategies

for changing the tradition-based attitudes of CPR providers.

Purpose of the study

The intent of this before-after quantitative study was to demonstrate the impact of a comprehensive educational program on attitudes and beliefs of acute care providers toward offering the option of family presence during resuscitation. Demographic data provided comparative information about how professional roles, clinical location and experience, and educational level may influence provider attitudes and opinions. Results of pre-education data were compared to results from other U.S. and international studies to ascertain the trends of common provider concerns. The research fills a gap in the growing body of literature on the topic by conducting the study in a non-academic community hospital setting, and included personnel outside of the emergency and critical care areas, including the general pediatric unit, and adult medical, oncology, and surgical units. Information about the effect of a comprehensive educational program on provider acceptance of offering the option of FWR may help other institutions embrace this new chapter in family-centered care.

Conceptual Framework

Moving the accepted practices of a healthcare system toward accepting FWR as a care standard first requires acceptance by individual healthcare providers within the system. Lewin's Change Theory (Lewin, 1958) was selected by the researcher as the foundation for a process of change. The researcher utilized the theory's processes to identify and address barriers to provider acceptance of FWR, and as a vehicle to present previous FWR research to the study subjects in an organized and logical fashion.

Lewin's Change Theory is a classic framework for change that includes a systematic, problem-solving method to facilitate change. According to Lewin's theory, in order to initiate, or manage a change, the change agent analyzes the situation early and continually for potential forces that may be both barriers and facilitators of change (Yoder-Wise, 2003). Barriers, also termed restraining forces, pull systems away from change, while driving forces are conditions that move systems toward change. These forces may originate with people, values, structures, or even technology (Yoder-Wise).

In order for the desired change to take place, driving forces must exceed restraining forces. Lewin's conceptual map, called force field analysis (figure 1), illustrates the idea of equilibrium within the system. The role of the change agent is to first disrupt system equilibrium by exposing the need for change, then re-establishing a new equilibrium by reducing the relative strength of barriers, while supporting actions that facilitate change (Huber, 2006; Yoder-Wise, 2003).

After the driving and restraining forces are identified, the change agent must guide stakeholders through three transition stages in order to effect the desired outcome (figure 2). The first stage is unfreezing, where people are first made aware of a problem, then taken from a state of being unready to change to being ready and willing to consider change. Leaders use push techniques such as education, motivation, and enthusiasm to move people out of a state of status quo into a position of receptivity. During the second experiencing stage, the leader presents information that illustrates how the driving forces outweigh the restraining forces, and offers clear strategies to achieve the desired change. Transitional pull techniques include coaching and facilitation, and others that lead to

acceptance of change such as re-education, system redesign, group forums, collective decision making, and application of incremental changes. In the third stage, individuals implement the change. This is the beginning of incorporating the new behavior into work and interpersonal processes. This final refreezing stage supports the group's adaptation to change, resulting in acceptance and the re-establishment of system stability (Yoder-Wise, 2003). Because successful systems must adapt to their environments, agents of change should not view the model as linear, but as a fluid process that requires the continual evaluation of resisting and driving forces (Huber, 2006).

Lewin's change theory was successfully applied to an evidence-based change process, that in this case resulted in development of the study facility's FWR guidelines (Appendix 1,2,3). Strategies from Lewin's theory were also applied during the study's educational presentations, and will be further described within this document's methodology section.

Literature Review

The English-language literature was searched using CINAHL-EBSCO, Ovid, and Medline data bases, using the key words and phrases "family presence," "cardiopulmonary resuscitation," "CPR," and "family-centered care." Article bibliographies were also reviewed to obtain additional references. Published, peer-reviewed quantitative, descriptive, and retrospective studies, and articles that provided anecdotal evidence, were evaluated for their relevance and currency. Restraining and driving forces were abstracted from the literature, and applied to an evidence-based power-point presentation modified from the Emergency Nurses Association (2007). In

addition to categorization of the studies findings as restraining or driving forces for FWR, literature was also presented to subjects that addressed ethicolegal issues, also identified as barriers to FWR. These categorized topics are presented in this document.

Restraining forces

Significant disparity was found in the literature between what families and patients need or want and the attitudes of some healthcare providers. Despite evidence that families and patients benefit from FWR, and the reported value that the public places on the autonomous decision-making of patients and families, FWR is often hindered by the perceived authority and benevolent paternalism of resuscitation teams. Results from international research conducted over the past two decades has consistently shown that the concerns and personal attitudes of those directly involved in resuscitative efforts are the primary reasons family presence is not offered.

Specific concerns are cited repeatedly. These include perceived emotional trauma to families witnessing resuscitation efforts (Belanger & Reed, 1997; Duran, et al., 2007; Ellison, 2003; MacLean, et al., 2003; McClenathan, et al., 2002; Meyers, et al., 2000; Mian, et al., 2007), fear of litigation by families (Belanger & Reed, 1997; MacLean, et al; McClenathan, et al.), discomfort in being observed by family members (Duran, et al; McClenathan, et al; Meyers, et al, 2000; Mian, et al.), the potential for a negative influence on team performance and team communication (Duran, et al; McClenathan, et al.), issues of security and confidentiality (MacLean, et al.), a lack of individual or institutional experience in caring for patients and families from diverse cultures (Ellison, 2003), and the fear of family interference in the resuscitation process (Belanger & Reed;

Duran, et al; Ellison; MacLean, et al; McClenathan, et al; Mian, et al.). Reviewing all of the available data, the Emergency Nurses Association (2007) concluded that many of these concerns are unfounded. In order to guide discussions during staff education about FWR, it was important to understand the demographic origins of these strong oppositional opinions.

Specific to nursing, Ellison (2003) used a Family Presence Support Staff Assessment survey tool to gather data on the educational level, specialty certification, and practice areas of 280 nurses, and correlated those qualities to nurses' attitudes about FWR. Findings showed a positive relationship between acceptance of FWR and higher educational level or certification. The study also found that nurses who worked in the emergency setting were more likely than any other group to support FWR.

Mac Lean, et al. (2003) surveyed a convenience sample of 984 members of the Emergency Nurses Association (ENA) and American Association of Critical Care Nurses (AACN). Analysis of answers related to FWR preferences and practices showed that support of FWR was most common in nurses with prior FWR experience.

Twibell, et al. (2008) developed two assessment scales, the Family Presence Risk-Benefit Scale, and the Family Presence Self-confidence Scale, to examine the relationship between nurse's self-confidence in providing support of families during resuscitation, and support of FWR in relation to the benefit versus risk to the patient, family, and resuscitation team. Results showed a positive correlation between nurses' self-confidence in caring for families during CPR and their support of FWR. The researchers stated that it was unclear whether self-confidence resulted in or was the result

of embracing the FWR experience. The researchers found that emergency nurses, who commonly integrate family members into the care environment, demonstrate more confidence and are the group most likely to welcome families during CPR. The strength of these findings were the large sample size (n= 375), inclusion of nurses from all acute care settings, and replication of the results from Ellison (2003).

Duran, et al. (2007) surveyed 202 nurses and physicians practicing in the neonatal intensive care, adult critical care, and emergency department of a large western academic hospital. Using a 47-item survey tool designed to collect data on provider attitudes and beliefs toward FWR, the researchers found that those who had had experience with family presence were more supportive than those with no prior involvement.

The study also demonstrated greater support overall of FWR by nurses than physicians.

Within the physician community, positive attitudes about FWR vary depending on both experience and specialty area. In a survey of 543 international critical care professionals, including physicians, nurses, and other healthcare professionals, McClenathan, et al. (2002) found that regardless of prior FWR or CPR experience, of the 494 physician respondents, 80% opposed FWR for adult patients, and 85% opposed FWR for children. Only 39% of physicians who had experience with FWR reported that they would allow it again. Those without prior experience with FWR were twice as likely to support FWR as physicians with prior experience (McClenathan, et al. 2002). Duran, et al. (2007) found that 46% of the 98 surveyed physicians supported FWR, with the greatest acceptance among non-attending physicians. Citing Hill, Knapp (2005) attributes the opposition by physicians who are experienced in FWR to a lack of training

in palliative, end-of-life, and bereavement care during medical training.

Meyers, et al. (2000) obtained different results. Of the 36 physicians surveyed, only 19% of resident physicians supported FWR, compared to 79% of more experienced physicians. O'Brien, Creamer, Hill, and Welham (2002) surveyed 245 physicians who attended a seminar of the American Academy of Pediatrics. They found that those involved in inpatient-oriented specialties and residents were twice as likely to allow parental presence during resuscitation as were respondents involved in outpatient-oriented specialties. The researchers in that study concluded that physicians who have more frequent contact with seriously-ill children and their parents are more likely to accept parental presence during both invasive procedures and resuscitation attempts.

Driving Forces

Family Perspective. Research conducted over two decades has shown that most family members believe it is their right to have the option of FWR (Duran, et al; Meyers, et al., 2000). Following two 1982 emergency room incidents that initiated the FWR debate, researchers at Foote Hospital retrospectively surveyed 18 family members of patients who had died during CPR efforts, and found that 72% wished they had been given the opportunity to be present during the failed resuscitation (Hanson and Strawser, 1992). When Barrat and Wallis (1998) questioned families who had not been offered the option of witnessing resuscitation, 69% said they wished they had been given the opportunity, even though not all would have accepted. Meyers, Eichhorn, and Guzzetta (1998) examined the beliefs of 25 family members of 18 patients, ages 8 to 90 years, who died in the emergency room after CPR. Although only 80% would have wanted to be present,

96% of respondents indicated that families should be allowed the choice to be present.

In the first published survey of families who accepted the option to be present during resuscitation, Doyle, et al. (1987) found that if in a similar situation, 44 of 47 respondents (94%) believed that they would participate in FWR again. In a later descriptive study, 100% of 43 family members who had witnessed invasive procedures or CPR stated they would do so again (Meyers et al. 2000).

Emotional and psychological benefits. The emotional benefit of FWR on family members is the predominate conclusion in both quantitative studies and descriptive references, and is frequently cited by proponents of FWR. In critical care and emergency medicine, the focus on cure along with highly technical life-sustaining capabilities may overshadow the fact that most patients who sustain cardiac arrest die, as demonstrated in a study by Peberdy, et al. (2008). The researchers examined data from 86,748 reported cases of in-hospital cardiac arrests, finding rates of survival to discharge ranged from 14.7% during nighttime hours to 19.8% during the day. As stated by Westlien and Nilstun (2003), consideration must be given to the fact that for many families, resuscitation efforts are often an end-of-life event, and the last opportunity to be near during a loved one's final moments.

Responding to the results of the 1982 study cited by Hanson and Strawser (1992), a family presence program was developed for the emergency department of Foote Hospital, a 500-bed non-academic community hospital, which at the time saw 53,000 emergency cases per year. In 1985, the hospital chaplain surveyed surviving family members following witnessed resuscitation. Of 47 family members surveyed, 76% felt

their grief was made easier by their experience at the bedside, and 64% felt their presence was beneficial to the deceased (Hanson & Strawser, 1992). Family members surveyed by Doyle et al. (1987) also thought that adjustment to the death or grieving was facilitated by witnessing the resuscitation efforts, and the majority felt that their presence was beneficial to the dying family member. Belanger and Reed (1997) report unanimous beliefs by surviving family members that FWR enabled better coping during their grieving process, and 100% of the 24 survey respondents stated that they would accept the option for FWR in a similar situation.

Some providers have concerns that witnessing the activities involved in a resuscitation event is too traumatic for most lay people. In the 2000 study by Meyers et al., family members admitted that their experiences were scary, difficult, and frightful, but also powerful and natural. For those events in which death resulted, FWR was perceived by some family members as a spiritual experience (Meyers, et al., 2000). All said their presence was important and helpful, and despite the unpleasantness, they would rather be present than not.

Duran, et al. (2007) used a “mean family presence attitude score” to determine the support for family presence by clinicians, family members, and patients. Seventy-two family members of critically-ill patients were surveyed about their feelings of being present during invasive procedures or resuscitation. Of 20 family members with previous experience with family presence, 89% said being present was helpful to them, and 95% said they would want to be present again. Family members felt that the option should be provided, and believed that if they were the patient it would be comforting to have their

family present.

Although limited by sample size, Robinson (1998) provides the only randomized study examining the long-term psychological effects of FWR on family members. Family members were randomized by code event to either have the option of being present during resuscitation, or were assigned to a control group and escorted to a waiting area, where they were given emotional support and technical information about the resuscitation effort, but not the option of FWR. Five standardized questionnaires were distributed to the final groups of control and study subjects (n=8 and 10 respectively) at 1 and 3 months after their experiences; the impact of events scale (IES) with two subscales for thought intrusion and avoidance behavior, the hospital anxiety-depression scale, the Beck depression inventory, and the Texas inventory of grief. Questionnaires returned at both three and nine months following the loss of their loved one showed family members who had experienced FWR had lower levels of post-traumatic avoidance behavior, and fewer symptoms of grief than those who did not witness the resuscitation efforts. Those who witnessed resuscitation also scored lower on the measure of intrusive imagery, indicating that the reality of witnessing resuscitation was less distressing than what they might have imagined had they been excluded from the patient room.

Anecdotal accounts also described the psychological impact of FWR. In articles published in daily newspapers (Graham, 2006; “Hospitals let families”, 2004) and in an open letter in a nursing journal (Baxter, 2004), three family members, who are also nurses, wrote of their personal experiences with FWR. All expressed the importance of having the opportunity to be present during the final moments of their adolescent

children's lives, and described focusing on their loved one, not on the technical aspects of the resuscitation attempt. In a segment included in educational materials published by the Emergency Nurses Association (2007), one mother of an accident victim is quoted to say,

“I was given a choice in the midst of a total loss of control. I needed to say some things. My son needed to hear them. This was time for unfinished business that could not wait for later. My imagination would have conjured up much worse things than the experience of his resuscitation. Explanations could not have convinced me of the grim reality that needed to be accepted or prepare me for the decisions that needed to be made to let him go. If I had not been there, I would have forever wondered if he could have come back if he just heard my voice. This experience helped my grief, especially my anger.”

Limitations to prior studies about how families feel about witnessing the resuscitation of a loved one include small sample sizes and a collective lack of geographic variation of the study locations. However, consistent themes of family connectedness were identified by families in all of these qualitative studies and anecdotal accounts; a sense that the patient was aware of their presence, of being helpful by being there for the patient, a feeling of peace or closure, and of grief made easier by the experience. There are no published accounts describing the experiences of families who have been negatively affected by their presence during CPR.

Redley (2003) conducted a systematic review of research to identify the needs of family members accompanying critically-ill patient in emergency settings. Five categories of family needs during crises were identified. Families are motivated by

1.) the need for meaning and assurance; 2.) proximity; 3.) information and communication; 4.) comfort; and 5.) support. Of these, proximity is most crucial during the initial stages of a patient's critical illness. Meaning and assurance are sought through alleviation of uncertainty, assurances of the best possible care, and by meeting a need to protect the dignity of the patient (Redley, 2003).

The significance of these needs are expressed by six family members in a study by Wagner (2004). Rather than exploring the benefits of FWR, Wagner shed light on the potential detrimental effects of prohibiting FWR. Citing Leske and Hupcey, Wagner stated that families experience a heightened need for vigilance during CPR, "when threatened by the permanent loss of their loved one." Families who were prevented from being near their loved ones during CPR were assessed for post-event coping by their responses to open-ended questions. Their isolation during resuscitation resulted in an inability to trust in the care team for full disclosure of information, leading to uncertainty and evidence of ineffective coping. The theme of "should we stay or should we go" was identified as the family members struggled to balance their need for information and closeness with the trust they must place in the healthcare team. The sample size (n=6) makes definitive conclusions about these findings premature, and indicates a need for further evaluation of the adverse psychological effect of prohibiting FWR in adult populations.

Patient Perspective. There are significant gaps and limitations in the research about what patients would prefer, as survival rates for CPR are generally low. Evaluation of what little information that is available indicates that patients may have similar needs for

family connectedness during medical crises and life-threatening events. In the previously cited study by Duran, et al. (2007) 62 surviving patients who had family members present during invasive procedures or CPR were surveyed about their experiences. Like family members, patients also felt it was their right to have their loved one(s) present and the option made available. They also felt that the proximity of a family member would be comforting.

All three patients in the study by Robinson (1998), who survived CPR expressed satisfaction that a family member was with them, and felt that the presence of a family member was helpful. In a study by Eichhorn, et al. (2001) eight patients who underwent invasive procedures and one who survived CPR expressed belief that having a family member near was comforting and helped them to cope. Having family present maintained the family bond and need for shared experiences. They viewed having family present as a patient right. None of the three surviving patients reported feeling that their confidentiality or dignity were compromised by having a family member present. Many expressed the feeling that having a family member present inspired healthcare professionals to consider their “personhood,” which they believed could result in more humane care (Eichhorn, et al., 2001). Belanger and Reed (1997) provide an anecdotal account of a man who was aware of his wife’s presence during a momentary period of consciousness during his resuscitation, and later stated his will to live was stronger with that knowledge.

Provider Perspective. Healthcare providers who are supportive of FWR describe practical, as well as psychosocial benefits. Positive statements by providers in the 2000

study by Meyers, et al. include the opinion that FWR gave them an opportunity to educate the family about the resuscitation process and assist the family to understand the severity of the patient's condition, which some believed could result in a decreased risk for lawsuits. Having the family present was also thought by providers to convey a sense of "personhood," reminding the team to consider the patient as a member of a family, and improving the team's consideration of the patient's privacy and need for pain management. They believed FWR helped the family to appreciate that all was done by witnessing and knowing it was so, resulting in a decrease in their uncertainty and better peace of mind. Providers stated that allowing FWR provided an opportunity for closure, and was a meaningful way of meeting the family members' emotional and spiritual needs. Nurses in the study by Ellison (2003) believed that FWR allowed them to support families making difficult end-of-life decisions based on quality of life issues.

Ethicolegal discussion. A recurrent concern expressed by healthcare providers is the fear that families who witness CPR would be more likely to seek legal action based upon their perception of the events and efforts (MacLean, et al.; McClenathan, et al.). There is no documentation that FWR either increases or decreases litigation risk (Emergency Nurses Association, 2007). Because there is no documentation that FWR has resulted in adverse outcomes, litigation, or patient/family harm, and there are documented benefits to FWR, Blair (2006) opines that rather than increase the risk of litigation with FWR, providers may increase the risk of legal liability by disallowing family presence when it is requested.

Another concern is that it may be a violation of a patient's rights to invite family

presence during resuscitation. Citing Osuagwu, McClenathan, et al. (2002) cites patient confidentiality as an argument against FWR, hypothesizing whether dying patients would prefer that loved ones “remember them as they were.” The study authors suggested that patient preferences for FWR be included in medical advanced directives. Using ethical decision-making based upon principles of surrogacy, unless those wishes are specifically known or documented, legitimate surrogates, who may have a better understanding of the patient’s values and beliefs, must be permitted to make decisions in the patient’s best interest (Jonsen, Siegler, & Winslade, 2002). Most states have legislation assigning legal authority to family members, ranked in priority. There are no published opinions by medical ethicists on the issues of patient rights, as related specifically to FWR.

Twibell, et al. (2008) asks, “who owns the family presence decision?” Patients and families are encouraged to be well-informed when making decisions about their healthcare. However, no matter their usual ability to participate in healthcare decision-making, in crisis situations families are overwhelmed, vulnerable, and dependent on health practitioners to act in the best interest of the patient (Benner, 2003). In the vast majority of studies previously cited, family members and patients who experienced FWR expressed the belief that FWR is a patient and family right. The critical nature of a resuscitation event requires that members of the healthcare team advocate for them.

Health care providers are polarized on whether FWR is a patient or family right. There are no published works by medical ethicists that address whether the question of rights should be determined by providers alone. Provider surveys show that they are often motivated by their personal opinions, rather than a sense of moral agency.

McClenathan, et al. (2003) summarizes the dilemma: Recognition of a relative's right to witness resuscitation depends on a professional's willingness to promote the principles of autonomy.

Benner (2005) states that being a good practitioner requires that healthcare professionals also form helping relationships and engage in ethical reasoning, not merely function out of obligation or tradition, and not merely possess technical expertise. Healthcare providers rely on utilitarian ethics to determine risk versus benefit and gage means versus outcome. When current FWR research results are examined from a position of utilitarian justice, family presence can be easily supported, as overall benefit appears greater than perceived harm. Unfortunately, few resuscitation events end well, and some providers are concerned that the potential impact on patient outcome is a moral reason to deny FWR (McClenathan, et al., 2003).

Day (2006) argues that FWR is a matter of value, not a matter of ethical debate. Day states that the question of allowing FWR should not begin with the assumption that families should be excluded until benefit is proven, as "reducing family presence to a means encourages us to take up an instrumental view of family relationships." If family involvement were considered a valuable component of patient care, rather than an intrusion, then the burden of adjusting to the presence of family would lie with individual clinicians, and it would be their own discomfort that creates distractions (Day).

Recommendations and implementation of FWR

As illustrated by the studies conducted on provider attitudes, opinions on FWR vary from physician to physician, nurse to nurse, and between these realms of practice.

Many concerns voiced by providers stem from an assumption that the term “family presence” implies unrestricted, unaccompanied access to the patient care area, resulting in exacerbation of an already stressful and emotionally charged situation (Ellison, 2003; McClenathan, et al. 2002; Meyers, et al. 2000). This belief is counter to the intent of a well-structured family presence policy or guideline; to recognize the rights of patients and families, and to respect the patient-family relationship while maintaining a system that protects the integrity of the patient care environment.

Henderson (2005) surveyed medical experts representing 18 professional organizations who convened to develop guidelines for FWR during pediatric invasive procedures and CPR. Following review of the literature and discussion, panel members were re-surveyed to determine shifts in opinions. Following the interventions, support of FWR by panel members rose from 43% to 87%. The panel, which ultimately developed a consensus report, recommended development of exclusion criteria to ensure the safety of the resuscitation team, and urged legal review of any policy prior to implementation.

Knapp (2005) called for a multidisciplinary consensus for guideline development. Meyers, et al. (2000) advised a family presence criteria, as well as an assigned facilitator role. These suggestions for formal FWR guideline development and implementation have been adopted successfully by numerous hospitals nationwide, however only one study by Mian, Warchal, Whitney, Fitzmaurice, and Tancredi (2007) showed the impact of a comprehensive educational program on provider attitudes, and the change in attitudes about FWR after policy implementation.

The study by Mian, et al. (2007) was limited to 86 emergency nurses and 35

emergency physicians. Prior to the policy implementation, hospital providers expressed the same common concerns previously cited. Following education on FWR, there was a 39% increase in nurse support of FWR. One year after the policy was implemented providers were again surveyed. An additional 36% were more supportive one year after the program began. Physician attrition deemed that part of the study inconclusive. Key factors in the successful implementation of the policy were attributed to strong support by hospital administrators, the assumption by those in the facilitator role of FWR outcomes, and the availability of the investigative team to provide mentoring during early FWR events.

Research Questions

The research questions for this study are as follows:

1. On whether family members should be given the option of FWR and whether FWR is a family right, how do the pre-education scores of nurses and physicians compare?
2. Among physicians, how do years of practice, experience in resuscitation, prior FWR training, and experience with FWR impact variables known to cause barriers to FWR?
3. Among nurses, how do practice location, years of professional experience, experience in resuscitation, prior FWR training, and experience with FWR impact variables known to cause barriers to FWR?
4. Are pre-education scores from these subgroups similar to findings from other regional studies?

5. Will a comprehensive educational program improve scores indicating fewer barriers to FWR and increased support for offering the option of FWR in each subgroup?

Definition of Terms

1. *Code*. Conceptually defined as is a directive or alert to a hospital team assigned to emergency resuscitation of patients. Operationally, “code” is a term used to signify the onset of an emergency event, and incorporates all activities taking place during the resuscitative effort.
2. *Family*. Conceptually and operationally defined as a related or unrelated person with whom the patient shares an established relationship.
3. *Family Facilitator*. The conceptual definition is a staff member (nurse, social worker, chaplain, nurse supervisor) dedicated to the family during and after a resuscitative event. The operational definition of Family Facilitator is a social worker, chaplain, or nursing supervisor trained to provide dedicated support to the family during and after a resuscitative event. The family facilitator responds to cardiopulmonary arrest events to assess the ability of the family to cope with the situation, provides medical explanations to the family of events occurring during resuscitation, and assists in providing emotional support during and after the event.
4. *Family Presence*. Conceptually, the presence of family in the patient care area, in a location that affords visual or physical contact with the patient during invasive procedures or resuscitation. For this study, the operational definition of family presence is limited to visual or physical contact with the patient during CPR.

5. *Health Care Provider.* An organization or individual provider of medical or health services who furnishes, bills, or is paid for health care in the normal course of business.

(U.S. Department of Health and Human Services, 2002). For this study, health care provider is defined as a hospital-based physician, Physician's Assistant, Advanced Practice Nurse, or Registered Nurse who provides care to patients in the hospital emergency or in-patient acute care settings.

6. *Resuscitation or CPR.* Conceptually, a sequence of events that are initiated to sustain life or prevent further deterioration of the patient's condition. Operationally, resuscitation includes all advanced cardiac life support protocols and procedures outlined by the American Heart Association, and may include invasive airway management, manual or automated chest compressions, cardioversion or defibrillation, administration of medications via airway or peripheral venous or central venous access, and other interventions determined to be essential for an improved patient outcome.

7. *Opinion.* Conceptually and operationally defined as a belief or judgment based on grounds insufficient to produce complete certainty. A personal attitude, or appraisal.

8. *Attitude.* Conceptually and operationally defined as a complex mental state involving beliefs, feelings, values, and dispositions that cause an individual to act in certain ways

Significance to Nursing

In accordance with professional values set forth by the International Council of Nurses (2000), affecting change that influences health policy is a goal for nursing on a global level. Utilizing a theoretical framework, this study adds to a growing body of nursing research that enhances the experience of the patient-family relationship through

the continuum of life. Agents of change in the realm of family presence during resuscitation are not limited to nurse leaders. However, the advocacy inherent in the philosophy and art of nursing has been instrumental in pushing the concept of FWR forward. As primary care providers, nurse practitioners are in a unique position to broaden the scope of family-centered care in the acute care setting.

CHAPTER TWO

METHOD OF STUDY

Introduction

The study was conducted in two phases. Phase I included establishing whether providers in this geographic location shared the same concerns about family witnessed resuscitation (FWR) as those in other U.S. regions. It also provided data for a force field analysis using restraining and driving forces specific to this study population, and served to clarify provider education needs as the study moved into phase II.

Phase II of the study followed the guidelines established by Lewin (1958) for affecting change within a system. This phase tested the efficacy of a comprehensive education program in changing provider attitudes toward offering the option of family presence during resuscitation. Subjects completed an identical survey before and after an educational presentation about FWR and a new facility guideline for offering FWR. Teaching strategies were based upon Lewin's unfreezing stage of change, using a power point presentation that addressed typical provider concerns and reviewed benefits as described in the available literature. The pre-post survey and educational tool were adapted from generic templates included in literature purchased from the Emergency Nurses Association (2007).

For this study, barriers to change were initially drawn from results of previous survey studies that described common nurse and physician attitudes and behaviors toward FWR. Results of studies that have examined the effects of FWR on families and patients are thought by FWR advocates to invalidate many of the perceived barriers. These study

results were considered valid driving forces for change, as were numerous professional position statements. Identifying the restraining and driving forces was instrumental when planning and implementing the unfreezing stage of Lewin's theoretical model.

Because cardiopulmonary resuscitation is a team process involving many healthcare disciplines, whole system planning and collective decision-making were selected as the foundation for the unfreezing stage. An interdisciplinary sub-committee comprised of well-respected representatives from medicine, nursing, pastoral care, pharmacy, nursing administration, clinical education, and risk management was recruited from the facility's code committee membership and by recommendation of the code committee chairperson. The sub-committee was co-chaired by the researcher and facility clinical educator. The purpose of their first meeting was to learn about FWR and consider development of a hospital-wide FWR policy. The team was led through an evaluation of FWR literature and facilitated discussion by the researcher and facility clinical educator. Unfreezing techniques that helped guide the team included 1) exposing that FWR is commonly conducted during resuscitations in this facility, but without a formal, structured guideline; 2) presentation of published qualitative and quantitative research findings showing the negative impact of family exclusion, and the positive impact of FWR ; 3) a challenge to include FWR as an extension of family-centered care, and as an opportunity to implement a progressive policy within the community; and 4) consideration of the consequences of an unstructured or prohibitory FWR practice, from both a professional and personal perspective.

During the second stage of change, the targeted system moves toward a new

equilibrium. This requires the traditional process to be replaced by the desired change. This movement involved group process to work together to achieve a consensual plan for initiating and sustaining FWR as a system change, as recommended by Knapp and Mulligan-Smith (2005). The interdisciplinary team met on two occasions at the study facility to re-examine previously identified restricting and driving forces, and designed a Family Presence During Cardiopulmonary Resuscitation Guideline (Appendix 1, 2, & 3). The guideline was constructed to meet the needs of patients and their families, and to fulfill safety and legal requirements recommended by sub-committee members. By including facility leaders within the committee membership, support of the concept was more readily accepted by those with administrative authority.

Stage three of Lewin's theory incorporates the new change into practice, resulting in its integration into the system's culture. Refreezing was begun by institutionalizing the change through development of the hospital guidelines. Once the guidelines passed through various hospital committees, they became the focus of a hospital-wide provider education program. The same theory-based change processes used during guideline development were utilized to design and implement this study's independent variable of FWR education.

Type of Design

The study's phase I demographic survey provided data for a non-experimental, descriptive design. Results of phase II pre and post-education surveys were used to obtain quantitative comparative data. Overall the study meets the definition of a before-after correlational design.

Setting for Study

Phase I of the study was conducted in two associated acute-care hospitals in the Inland Northwest. One facility is an urban 388-bed level-2 trauma center that also serves as a clinical location for a multi-state physician residency program. The other setting is a 123-bed level-3 trauma center located in a suburban community setting.

Phase II of the study was conducted exclusively in the non-academic setting. Neither facility had a policy or guideline for family presence during invasive procedures or resuscitation prior to the study.

Population and Sample

Approval to electronically contact potential subjects for recruitment into the study, and permission to distribute the surveys, was granted by each facility's senior nurse executive officer. To be included in either phase of the study, subjects had to be English speaking and hold a current license as a registered nurse or physician in the state of Washington. Consent to participate in any phase of the study was implied by return of a completed survey. Participation was voluntary and anonymous, and confidentiality was assured.

In phase I, a convenience sample was recruited from all physicians in the emergency departments, and registered nurses in the emergency departments all bedded units of both facilities. Physicians training in the internal medicine and family practice residency programs were also invited to participate. Surveys were placed in unit-specific employee mailboxes for nurse and physician employees by the researchers. Resident physician surveys were distributed by the director of each program. Employees were also

contacted electronically by the researcher and asked to participate in the survey.

Subjects completed the phase I survey in February 2008. A total of 350 surveys were distributed to potential subjects in both facilities. Phase I surveys were returned by a total of 140 subjects. After phase I analysis, data from the larger facility (n=90) were set aside for use in future studies or for facility-specific purposes. Demographic data from phase I is presented in table 1.

Phase II surveys were distributed by the researcher to all attendees prior to and following presentation of FWR education at the non-academic study facility. Due to low response rates in phase I, subjects who had not previously completed a pre-education survey were invited to do so prior to the FWR instruction. Those who had previously participated in phase I of the study were asked not complete a phase II pre-education survey. An additional 44 surveys were returned, and added to the facility data from phase I for a total of 94 pre-education data sets. Presentation of the educational program and distribution and collection of the phase II surveys were conducted from August 23 through November 4, 2008. All attendees of the FWR education program were invited to complete a post-education survey. A total of 25 post-education surveys were returned. The demographic data from phase II samples are shown in table 2.

Instrumentation, Reliability and Validity

The survey consisted of two parts (Appendix 4). Page one collected demographic variables for gender, profession, years in practice, practice facility, area of practice, and nurse educational level. Specific for FWR, subjects were asked to indicate prior FWR training or education, estimated number of resuscitation events directly involved in

during the past year, and an estimate of their total number of prior FWR experiences. Experience frequencies were none, 1 time, 2-5 times, 6-10 times, 11-20 times, 21-30 times, and more than 30 times. Page two of the survey was adapted with permission from the Emergency Nurses Association (2007), and modified to answer questions specific to this study. Using a 4-point Likert scale, answer options ranged from strongly disagree (1) to strongly agree (4).

Surveys were pilot-tested by five critical care nurses with clinical experience ranging from less than one year to over 15 years. Those who pilot-tested the survey were asked to comment on readability of the proposed questions and overall survey format. Minor changes in terminology and layout were made. There was also a request to include a fifth scale option for “undecided” or “unknown.” The investigator decided that respondents would be more likely to offer subjective comments in a dedicated section of the instrument if a neutral option was not made available.

Content validity of the survey questions was established by a panel of three masters and doctorally prepared nurses with extensive critical care and/or research experience. A four-point Likert scale was used to rate each of the ten study questions from 1-4, with a 3-4 rating indicating acceptability of each question (Waltz, Strickland, & Lenz, 1984) for examining providers’ beliefs about barriers and benefits of FWR in the acute care setting, and of provider attitudes FWR. Similar survey tools used by Duran, et al. (2007) and Mian, et al. (2007) had been deemed valid through expert review.

For phase I, eight survey questions were chosen to represent perceptual variables of provider support of FWR; questions 1, 2, 3, 4, 5, 6, 9, and 10. After reverse coding

questions 1, 2, 4, 5 and 6, internal reliability of these eight variables was established with a Cronbach Alpha value of .884. For Phase II, questions 1, 2, 3, 4, 6, 7, 9, and 10 were chosen as perceptual indicators of teaching effectiveness and FWR support. These questions had a Cronbach Alpha value of .882.

Data Collection Procedure

In phase I, identical pre-test surveys were hand-distributed via employee mail to all prospective subjects at both study sites. Completed surveys were returned by U.S. mail in a stamped, pre-addressed envelope to the office of the clinical educator at the community hospital. Phase II survey distribution occurred at the beginning of each education session. To ensure anonymity, all attendees were given a blank survey by the researcher, who then left the education area. Once attendees had the opportunity to complete the survey, a proctor collected all surveys, including blanks, and placed them in a sealed envelope addressed to the clinical educator. Following the educational presentation, an identical post-education survey was distributed, and all attendees who had completed and returned a pre-education survey in either phase of the study were asked to complete a final survey. These respondents were given the option of returning the post-education survey directly to the clinical educator in a sealed envelope, or by inter-facility mail addressed to the clinical educator.

Surveys returned within one week following the final presentation were included in the post-education results. Surveys from both study phases were kept in a locked cabinet, in the secure office of the clinical educator at the community hospital. Completed surveys will be shredded 3 years following dissemination of study results.

Data Analysis

The collected surveys were coded and visually checked for completeness, then double-entered into separate computer files by the investigator and clinical educator. The two sets of data were visually inspected for inconsistencies, and if found, the original instrument was reviewed and corrections were made. Frequencies were obtained for demographic data. Pearson's and Spearman's rho correlations, and regression analysis, were used to analyze relationships between demographic variables and chosen perceptual variables within and between subgroups in phase I. For phase II, an independent samples t test was used to compare the pre and post-education mean scores of the variables chosen to exemplify teaching effectiveness and support of FWR, in physician and nurse groups. The SSPS version .16 statistical package was used for all data analyses.

Human Subjects Considerations

The researcher was certified in basic human subjects research (Appendix 5). The study was reviewed by the Washington State University (WSU) Institutional Review Board, and forwarded and approved by the Institutional Review Board-Spokane, which is the approval agency for WSU and for research conducted within the study facilities. Exemption to full IRB review was sought and granted, as the study data contained no identifiable private information and met all criteria as posing a low risk to participants. (Appendix 6, 7, 8).

Some survey questions had the potential to cause participants to relive personal or clinical experiences that could result in emotional stress or discomfort. This potential risk was discussed during the introduction cover-letter to study subjects (Appendix 9, 10,

& 11). Participants were invited to remove themselves at will from the study at any time during the survey, and resources for psychological and emotional support were provided. Consent to participate in the study was implied by return of a completed survey. Participation was voluntary and anonymous, and confidentiality was assured.

Should any study subject or a member of their family suffer a life-threatening event, the subject would directly benefit from the acceptance by healthcare providers of offering the option of family member presence in the patient care area. All healthcare providers will benefit from a richer understanding of the impact of FWR, and by any standards of practice or agency policies that result in improvements in holistic care, patient and family outcomes, and socially relevant practices.

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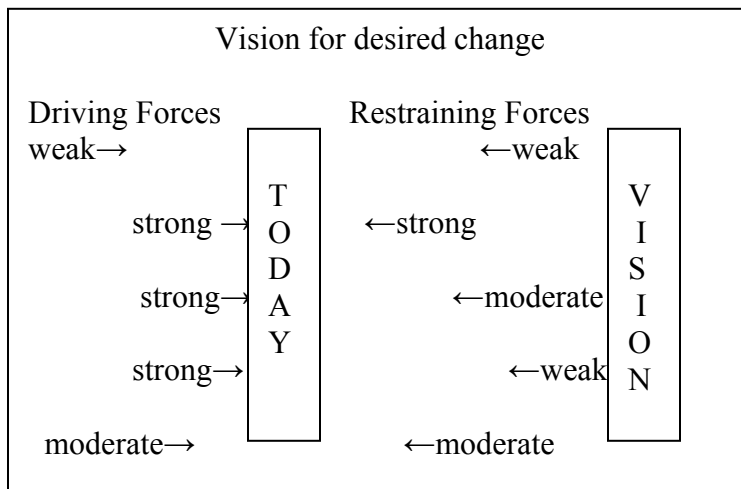
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Figure 1

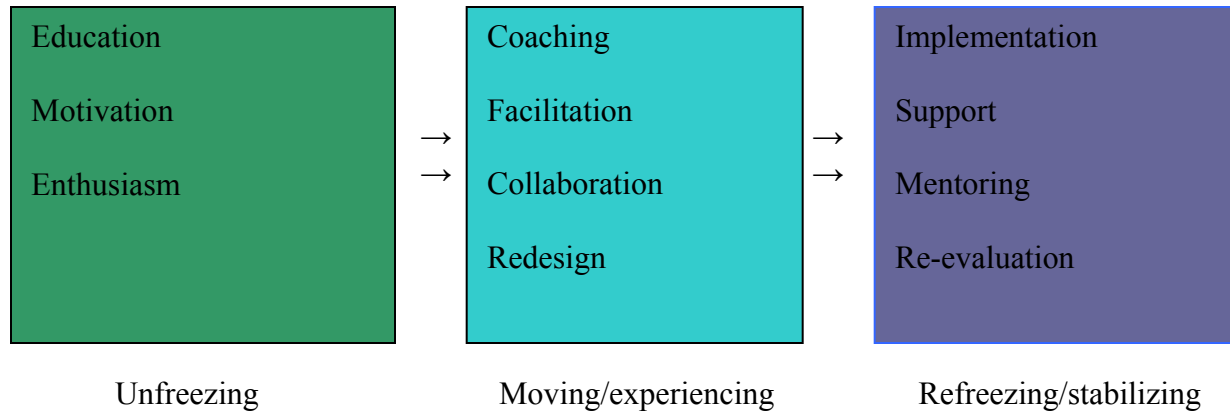
Lewin's Change Theory – Force Field Analysis



(Modified from Value Based Management.net, 2008; University of Cambridge, undated)

Figure 2

Lewin's Theory of Change Model



(Modified from Lewin, 1958)

Appendix 1

Family Presence During Resuscitation Guidelines

- POLICY:** In an appropriate set of circumstances, family members will be offered the option of being present during resuscitation efforts.
- DEFINITIONS:**
- Family:** a related or unrelated person with whom the patient shares an established relationship.
- Family Facilitator:** A role primarily filled by the Nursing Supervisor, with secondary support by the Social Worker or Chaplain on duty. The facilitator is dedicated to the family during and after a resuscitative event. The family facilitator responds to codes to assess the ability of the family to cope with the situation, provides medical explanations to the family of events occurring during resuscitation, and assists in providing emotional support during and following the code event.
- Family Presence:** the presence of family in the patient care area, in a location that affords visual or physical contact with the patient during resuscitation events.
- Resuscitation:** a sequence of events that are initiated to sustain life or prevent further deterioration of the patient's condition.

- PROCEDURE:** When a Code 55 is called, a family facilitator will respond.
- Nursing Supervisor: 7 days, 24 hours
 - Social Worker: Monday through Friday 0700 – 1600
Saturday 0800 - 1400
 - Pastoral Care: Hours vary, on-call 7days, 24 hours
The social worker or on-call chaplain may be paged through the hospital operator as needed for code events.

1. **Consult with the Code leader:** If the patient is conscious, and the direct care providers agree that family visitation is possible, the patient will be asked if he/she wishes to have family members present.

Upon their arrival, the Family Facilitator will first identify the Code Leader (physician) and ask if the family can be present. If the Code Leader agrees to family presence, the family facilitator will then approach the family to provide information about the patient's status and response to treatment, and evaluate whether family members are suitable candidates before family presence is offered. **See Facilitator Decision Tree and Facilitator Instructions.**

2. Assess family members: Family members will be assessed for appropriate levels of coping and the absence of combative behavior, extreme emotional instability, behaviors consistent with altered mental status and cognitive impairment (i.e. mental/emotional disabilities.)

The number of family members allowed into the patient's room during a resuscitative event will be decided by the Code Leader based on the individual situation.

When prioritizing family member's visitation and determining next of kin, the consent for medical treatment guidelines will be used.

3. Prepare family members: Before entering the patient care area, the family facilitator will explain about the patient's appearance, treatments, and equipment used in the care room. The family facilitator will prepare the family for entering the patient care area by communicating that patient care is the priority, and then explaining how many family members may enter the room, where they may stand/sit, situations in which they would be escorted out of the room (unexpected patient events or family becoming overwhelmed or disruptive), possible time restrictions, that they may leave the room at any time, and any other pertinent factors. In order to maintain the patient's dignity and confidentiality, the facilitator will inform family members allowed into the patient's room that the use of cell phones, cameras or other devices used to take pictures or videos will not be allowed. The facilitator will work with the team to identify the optimal time to bring the family in-ideally within 10 minutes of their arrival

4. Escort family members: The family member(s) will enter the patient care area escorted by the family facilitator. The facilitator will assume responsibility for keeping the resuscitation team knowledgeable of the family's whereabouts. At no time should the family be in close proximity without the team being made aware. The family will not be allowed in the patient care area without a facilitator present.

If appropriate, the family will be provided with personal protective equipment and instructed on its use. They will also be informed where to stand and what not to touch to prevent contaminating the patient or supplies during a sterile procedure.

The family facilitator will:

- Explain interventions
- Interpret medical or nursing jargon
- Provide information about expected outcomes or the patient's response to treatment
- Provide comfort measures, such as a chair at the patient's bedside or tissues
- Provide an opportunity to ask questions
- Provide an opportunity to see, touch, and speak to the patient as directed by the code Team Leader
- Provide frequent updates to the family

If the family member becomes faint, hysterical or disruptive at the bedside, the family facilitator will immediately escort him/her from the area and arrange appropriate supportive care.

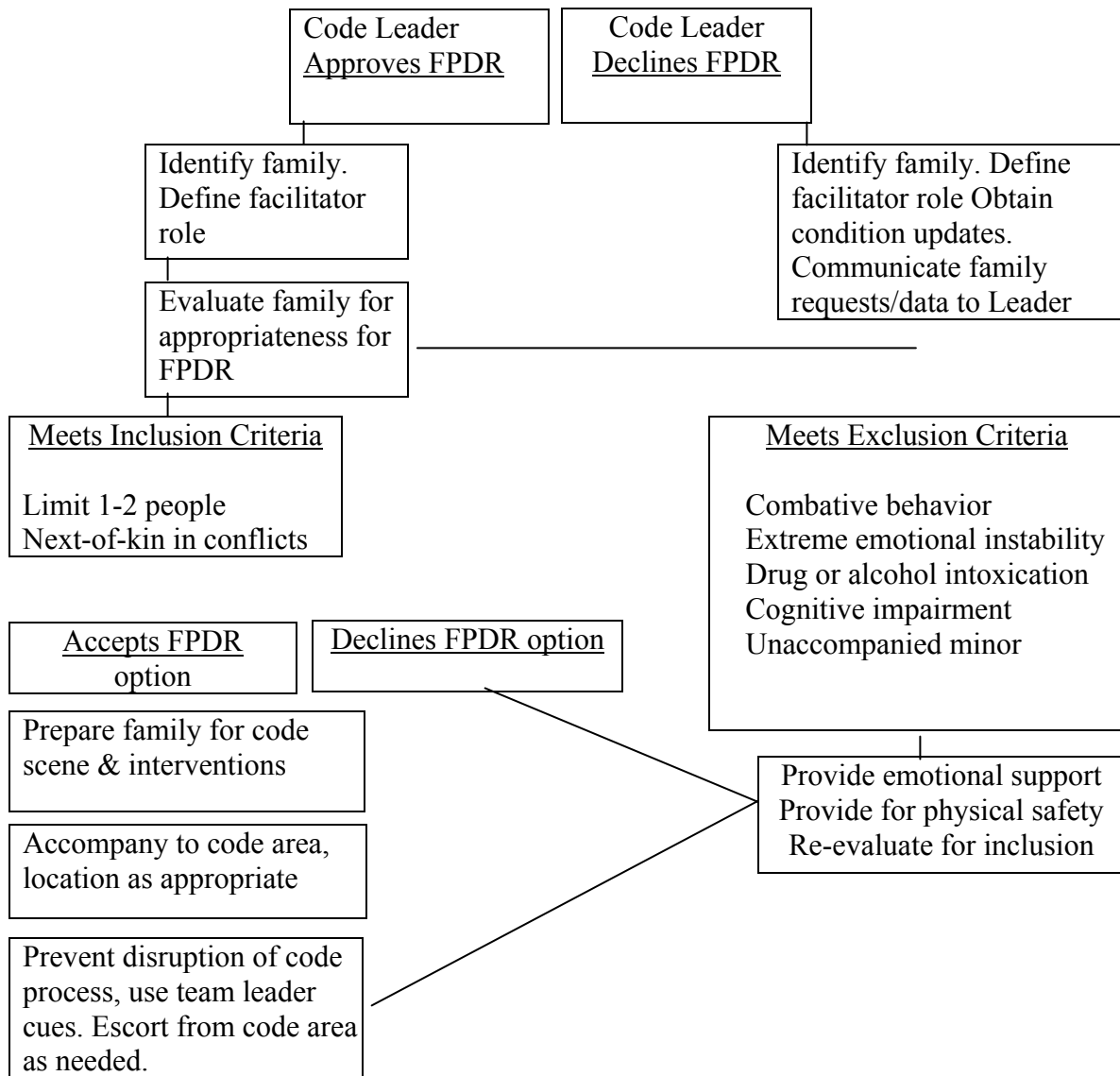
After completing the patient visit, the family facilitator will escort the family to a comfortable area, address their questions and concerns, provide comfort measures and address other psychosocial and physical needs identified during the visit.

If staff involved in family presence identify the need for debriefing the case, the nursing supervisor or department manager will be notified for appropriate follow-up.

The family facilitator will communicate needs for family follow-up to Pastoral Care Services.

Appendix 2

Family Presence Decision Tree



Appendix 3

Family Facilitator Instructions

1. Consult with healthcare team As early as possible, inform healthcare team of families' presence. Request permission for visit. Both team and facilitator should be in agreement and determine appropriate time for visit. Departmental situations/constraints should be considered.

2. Assess/screen family members

A. Determine preference of patient, if possible. Assess families' perception and understanding of the clinical situation and scope of crisis, need to be with patient, coping abilities, comfort level with medical environment, ability to ask for help/leave area. Consider cultural preferences.

B. Exclusion criteria would include combativeness, agitation, extreme emotional instability, altered mental status, and intoxication. Families who do not wish to participate should be supported. Refer to Family Presence Decision Tree.

3. Prepare family members

A. The facilitator will present the clinical situation, explaining what the family member can expect to observe during the patient's treatment. The facilitator will explain to the family that patient care is the top priority, the time limitations, where family members may stand, situations in which they would be escorted out of the room, and reassurance that they may leave at any time. Family members agree to the structure of the visit:

Before we go to the treatment area, we need to agree that:

1. I will stay with you the entire time you are in the treatment area.
2. Because of the medical activity, you may be able to stay only for a few minutes.
3. I will try to get you as close to "[patient's name]" as possible.
4. You can leave any time you want, but as medical care is our priority, I will have to ask you to leave if there is any interference with the patient's medical care.
5. The medical team is always in charge of the treatment. I will explain the patient's medical care when we are in the treatment area and I will answer all of your questions.
6. The use of cell phones, cameras or other devices used to take pictures or videos will not be allowed.

4. Escort family members to bedside

The facilitator will remain with the family at all times during the visit and will explain procedures and answer questions. The family will be allowed to see, touch, and speak with the patient when possible. After the visit, the facilitator will escort the family to a private room and provide clinical updates on the patient's condition. Family follow-up is provided by the facilitator, the primary nurse, or pastoral care.

Appendix 4

Presenting the Option for Family Presence during Resuscitation: Provider Survey

Dear Survey Participant,

This survey will be used to examine CPR provider beliefs about **presenting the option for family presence during resuscitation**. Your answers will remain anonymous. Your participation is voluntary, and return of the survey implies your consent to be included in this study. Please answer each question on the survey, and provide only one answer per question. If you would like to share any experiences you have had with family presence during resuscitation your comments will be welcome, but not included in data analysis.

For the purpose of this survey, family presence is defined as **the presence of family in the patient care area, in a location that affords visual or physical contact with the patient during resuscitation events (CPR)**.

Please check the appropriate spaces:

Gender: Male ___ Female ___

Profession: MD ___ APN (ie. ARNP, CNS, CRNA) ___ PA ___ RN ___

Years in practice: 0-5 ___ 6-10 ___ 11-15 ___ >15 ___

Practice Facility: DMC ___ VHMC ___ Both ___

MD / PA / APN area of practice: Emergency Care ___ Critical Care ___ General Inpatient ___

RN area of practice: Emergency Care ___ Adult Critical Care (ICU/CICU) ___ Pediatrics ___
Neonatal Critical Care (NICU) ___ Telemetry/Progressive Care ___ Medical/Surgical ___
Administrative/Management ___

RN education level: ADN ___ Diploma ___ BSN ___ MSN ___ Doctorate/PhD ___

Have you had training or education related to family presence during resuscitation?

Yes ___ No ___

In approximately how many resuscitations have you been directly involved in the past year?

None ___ 1 ___ 2-5 ___ 6-10 ___ 11-20 ___ 21-30 ___ >30 ___

In approximately how many resuscitations have you had prior experience with family presence during CPR?

None ___ 1 ___ 2-5 ___ 6-10 ___ 11-20 ___ 21-30 ___ >30 ___

Circle the number to indicate your agreement or disagreement with the following statements:

	Strongly Disagree	Disagree	Agree	Strongly Agree
1. Witnessing CPR efforts causes emotional trauma to family members	1	2	3	4
2. Family members who witness CPR are more likely to file lawsuits	1	2	3	4
3. Family presence during CPR results in higher rates of family satisfaction with care	1	2	3	4
4. The presence of family members interferes or interrupts care of the patient	1	2	3	4
5. I would feel more anxiety and/or stress with family members present during CPR	1	2	3	4
6. The presence of family members during CPR would inhibit the code team members from communicating freely.	1	2	3	4
7. Family members who witness CPR attempts may suffer fewer psychological difficulties during bereavement.	1	2	3	4
8. I feel comfortable providing psycho-social-spiritual support to family members during CPR situations	1	2	3	4
9. Family members should have the option to be present during CPR	1	2	3	4
10. The option of family presence during CPR is a patient/family right	1	2	3	4

Modified from Emergency Nurses Association (2007).

We welcome your comments:

Appendix 5

Human Subjects Training Certification

CITI Collaborative Institutional Training Initiative

**Human Research Curriculum Completion Report
Printed on Wednesday, December 19, 2007**

Learner: Lori Feagan (username: LoriFeagan)

Institution: IRB-Spokane

Contact Information 22611 E. Broad Ave
Otis Orchards, WA 99027 Spokane
Department: ICU
Phone: 509-473-5470
Email: LoriFeagan@gmail.com

Group 3. New Social / Behavioral Research Certification: New -- For investigators and key personnel who do not have a training certificate already on file with IRB-Spokane.

Stage 1. Basic Course Passed on 12/19/07 (Ref # 1468690)

Required Modules	Date Completed
Introduction	12/19/07
History and Ethical Principles - SBR	12/19/07
Defining Research with Human Subjects - SBR	12/19/07
The Regulations and The Social and Behavioral Sciences - SBR	12/19/07
Assessing Risk in Social and Behavioral Sciences - SBR	12/19/07
Informed Consent - SBR	12/19/07
IRB-Spokane	12/19/07

For this Completion Report to be valid, the learner listed above must be affiliated with a CITI participating institution. Falsified information and unauthorized use of the CITI course site is unethical, and may be considered scientific misconduct by your institution.

Paul Braunschweiger Ph.D.
Professor, University of Miami
Director Office of Research Education
CITI Course Coordinator

Appendix 6

Washington State University IRB Review



(b)
Office of Research Assurances

January 2, 2008

Jan Eldredge
Institutional Review Board – Spokane
310 N. Riverpoint Blvd
PO Box 1495
Spokane, WA 99210-1495
Dear Jan:

This letter is to inform you that the Washington State University Institutional Review Board (WSU IRB) has completed an administrative review on the protocol listed below.

WSU PI: *Lori Feagan*

Title of Protocol: *Presenting the Option Family Presence During Resuscitation: The Effect of Education and Experience on the Attitudes of Emergency and Acute Care Providers*

WSU IRB#: *10185-001*

The protocol is now being forwarded to the Institutional Review Board – Spokane for review as per the cooperative agreement between the WSU IRB and Institutional Review Board – Spokane.

If you have any questions, please feel free to contact me at (509) 335-3668 or mjandhyala@wsu.edu.

Sincerely,

A handwritten signature in cursive script that reads "J. Malathi".

Malathi Jandhyala
Government Assurances Coordinator
Washington State University Institutional Review Board

Appendix 7

Institutional Review Board Approval - General Study and Phase I Employee Letters

Institutional Review Board - Spokane

Protecting Human Subjects from Research Risks

January 9, 2008

Lori M. Feagan, RN, BSN, CCRN
Valley Hospital and Medical Center
Educational Services
12606 E. Mission Ave.
Spokane Valley, WA 99216

RE: IRB 1454 -- " Presenting the option of family presence during resuscitation: The effect of education and experience on the attitudes of emergency and acute care providers [WSU IRB# 10185-001]"
Approval Expiration Date: 12/31/08

Dear Ms. Feagan:

Your research study referenced above has been reviewed and granted expedited review and approval by the Institutional Review Board - Spokane on January 9, 2008 for conduct at Deaconess Medical Center and Valley Hospital and Medical Center. Review and approval were expedited because this study poses minimal risk to subjects. Items reviewed and approved include:

Name of Document:	Version Date:
Application and Protocol	Rec'd 12/17/07
Employee Letter and Survey Instrument	Rec'd 12/17/07

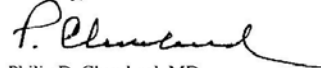
Approval for conduct of this study expires December 31, 2008.

The following conditions apply to this project:

- The study will be subject to continuing review. Your first progress report is due in November, 2008, for review at the December, 2008, IRB meeting. If your study continues to be active beyond the approval period, submit a request for continuation in the progress report. Please note that continuation of research after expiration of IRB approval is a violation of the FDA regulations [21 CFR 56.103 (a)]. Studies will be suspended if the progress report is not received by the expiration date.
- Emergent problems, unexpected side effects, serious adverse reactions and deaths, whether or not study-related are to be reported within five days (form is accessible on the web site).
- Procedural changes or amendments and consent form revisions must be approved by the IRB (form is accessible on the web site). No changes may be made without IRB approval except to eliminate apparent immediate hazards.
- Periodic site visits may be made by the IRB. You will be requested to provide the pertinent information if your project should be reviewed.

If your project has been significantly altered as a result of the IRB review and recommendations, it is your responsibility to notify the study sponsor of the changes.

Sincerely,



Philip D. Cleveland, MD
Co-Chair

Institutional Review Board - Spokane

310 N. Riverpoint Blvd. PO Box 1495, Spokane, WA 99210-1495
(509) 358-7631 • FAX: (509) 358-7627 • Email: eldredge@wsu.edu
<http://www.irb.spokane.wsu.edu>

Appendix 8

Institutional Review Board Approval – Phase II: Amended Employee Letters & Approval
for Employee Education



INSTITUTIONAL
REVIEW BOARD
SPOKANE

July 10, 2008

Lori Feagan
Education Services
Valley Hospital & Medical Center
12606 E. Mission Ave.
Spokane Valley, WA 99216

Re: IRB 1454 -- "Presenting the option of family presence during resuscitation: The effect of education and experience on the attitudes of emergency and acute care providers"

Dear Ms. Faegan:

For the referenced study, the following have been reviewed and granted expedited approval by the IRB-Spokane:

Name of Document:	Version Date:
Subject letter (document A) – revised to include only employees at Valley Hospital and Medical Center; identified project as graduate degree project, reduced length of discussion about emotional impact of completing study.	7-7-08
Subject letter (document B) – new document for participation following educational program.	7-7-08
Education program - "Presenting the Option for Family Presence".	7-7-08

The following conditions apply to this project:

All new patients entered on this study must sign the most recent IRB stamped approved consent form. You are responsible for maintaining all consent forms in medical charts as appropriate and in your personal records. Consent forms must be kept on file for a period of three years.

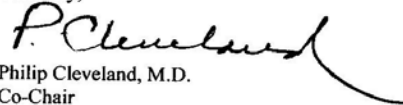
The study will be subject to continuing review. If your study continues to be active beyond the approval period, submit a request for continuation in the progress report. Please note: Continuation of research after expiration of IRB approval is a violation of the FDA regulations [21 CFR 56.103 (a)]. Studies will be suspended if the progress report is not received by the expiration date. A final report will be required on completion of the study or on the next review date.

Emergent problems, unexpected side effects, serious adverse reactions and deaths, whether or not study related, are to be reported within five days (*appropriate SAE report form can be found on our web site*).

Procedural changes or amendments must be reported to the IRB (*appropriate amendment form can be found on our web site*), and no changes may be made without IRB approval except to eliminate apparent immediate hazards.

Periodic site visits may be made by the IRB. You will be requested to provide pertinent information if your project should be reviewed.

Sincerely,


Philip Cleveland, M.D.
Co-Chair

104 W. Fifth Ave., Suite 200W, Spokane, WA 99204
(509) 343-2121 • FAX: (509) 343-2123 • Email: llewelcm@jehsa.org
<http://irbspokane.inhs.org>

Appendix 9
Employee Cover Letter Phase I.

Dear Empire Health Employee,

An invitation to participate in this facility-based survey has been extended to you based upon the likelihood that you may be directly involved in cardiopulmonary resuscitation (CPR) events. This survey has been approved by the Institutional Review Board - Spokane (IRB). The study will examine CPR provider beliefs about **providing the option of family presence during resuscitation**, and help guide future development of institutional guidelines.

Should you choose to participate, be advised that some questions may cause you to recall or emotionally relive prior resuscitation events, which may have been troubling or emotionally disturbing. If while taking the survey you experience emotional distress, you should refrain from completing the survey and seek support or guidance from a personal or professional counselor. Empire Health Services provides counseling to employees in need of emotional or spiritual support through the Employee Assistance Program and/or Pastoral Care Services. Contact numbers for these services are provided below. If participation in this study causes extreme emotional distress or results in acute psychological instability, please consider contacting the Spokane Mental Health 24 hour Crisis Line, also listed below.

Participation in the survey is voluntary, and return of the survey implies your consent to have your answers included in the study data. Your answers will be anonymous. This survey should take less than 10 minutes to complete. Please return both pages of the survey using the attached stamped envelope.

Thank you for your time and consideration.

Lori Feagan, RN, BSN, CCRN

Nancy Fisher, RN, MSN, CMSRN

EHS Employee Assistance Program (EAP) offered through Solution Resources: **(509) 535 – 4074**

EHS Pastoral Care Services: **(509) 473 - 7145**

Spokane Mental Health 24 hour Crisis Line: **(509) 838 – 4428**

Appendix 10

Employee Cover Letter, Phase IIa

Dear VHMC Health Care Provider,

An invitation to participate in this facility-based survey has been extended to you based upon the likelihood that you may be directly involved in cardiopulmonary resuscitation (CPR) events. The study is being conducted by Lori Feagan BSN, CCRN, a Graduate Student in the Family Nurse Practitioner program at Washington State University. An identical survey was distributed earlier this year, however more data will improve the statistical significance of the survey results. If you completed an earlier survey, we thank you for your time and input and ask that you disregard this request. This survey has been approved by the Washington State University Institutional Review Board and the Institutional Review Board - Spokane (IRB). The study will examine CPR provider beliefs about **providing the option of family presence during resuscitation**.

Should you choose to participate, be advised that some questions may cause you to recall or emotionally relive prior resuscitation events, which may have been troubling or emotionally disturbing. If while taking the survey you experience emotional distress, you should refrain from completing the survey and seek support or guidance from a personal or professional counselor. Empire Health Services provides counseling to employees in need of emotional or spiritual support through the Employee Assistance Program and/or Pastoral Care Services. Contact numbers for these services are provided below.

Participation in the survey is voluntary, and return of the survey implies your consent to have your answers included in the study data. Your answers will be anonymous. This survey should take less than 10 minutes to complete. Please return both pages of the survey using the attached envelope addressed to Nancy Fisher in the VHMC education office, via interoffice mail. If you have any questions regarding this study or its procedures please feel free to contact either Lori Feagan or Nancy Fisher. Thank you for your time and consideration!

Lori Feagan, RN, BSN, CCRN
Masters Degree Candidate
Washington State University
feaganl@empirehealth.org

Nancy Fisher, RN, MSN, CMSRN
Clinical Educator
Empire Health Services
fishern@empirehealth.org

EHS Employee Assistance Program (EAP) offered through Solution Resources: **(509) 535 – 4074**
EHS Pastoral Care Services: **(509) 473 - 7145**
Spokane Mental Health 24 hour Crisis Line: **(509) 838 - 4428**

Appendix 11

Employee Cover Letter, Phase IIb

Dear VHMC Employee,

Now that you have complete the education program about the new “Guideline for Offering the Option of Family Presence During Resuscitation,”, we would like to reevaluate your opinions on the topic. This final survey will complete the study being conducted by Lori Feagan BSN, CCRN, a Graduate Student in the Family Nurse Practitioner program at Washington State University. This survey has been approved by the Institutional Review Board – Spokane (IRB). The study will examine CPR provider beliefs about **providing the option of family presence during resuscitation**.

As with the pre-education survey, should you choose to participate, be advised that some questions may cause you to recall or emotionally relive prior resuscitation events, which may have been troubling or emotionally disturbing. If while taking the survey you experience emotional distress, you should refrain from completing the survey and seek support or guidance from a personal or professional counselor. Empire Health Services provides counseling to employees in need of emotional or spiritual support through the Employee Assistance Program and/or Pastoral Care Services. Contact numbers for these services are provided below.

Participation in the survey is voluntary, and return of the survey implies your consent to have your answers included in the study data. Your answers will be anonymous. This survey should take less than 10 minutes to complete. Please return both pages of the survey in the attached envelope addressed to **Nancy Fisher in the VHMC education office, via interoffice mail, within one week of today’s course**. If you have any questions regarding this study or its procedures please feel free to contact either Lori Feagan or Nancy Fisher. Thank you for your time and consideration! Thank you for your time and consideration.

Lori Feagan, RN, BSN, CCRN

Nancy Fisher, RN, MSN, CMSRN

EHS Employee Assistance Program (EAP) offered through Solution Resources: **(509) 535 – 4074**

EHS Pastoral Care Services: **(509) 473 – 7145**

Spokane Mental Health 24 hour Crisis Line: **(509) 838 – 4428**

Table 1
Phase I Demographic Results

Characteristic	Nurses	PA	Physicians	Total %
Gender	n=111	n=2	n=27	N=140
Female	93	1	13	76.4
Male	18	1	14	23.6
Yrs in practice	n=110	n=2	n=27	N=139
0-5	24 (21.8 %)	1	17 (63 %)	30.2
6-10	21 (19.2 %)	0	0	15.1
11-15	14 (12.7%)	1	3 (11 %)	12.9
>15	51 (46.4 %)	0	7 (26 %)	41.7
Practice location	n=111	n=2	N=27	N=140
Emergency	17	2	13	22.8
Critical Care	25		1	18.6
Acute/Progressive care	17			12.1
Pediatric/NICU	17			12.1
Med/Surg/Ortho	35			25.0
General inpatient			13	9.3
RN education	n=111			N=111
Associate's degree	34			30.6
Diploma	16			14.4
Bachelor's degree	56			50.4
Master's degree/PhD	5			4.5
CPR past year	n=111	n=2	n=27	N=140
none	22		1	16.4
1	17		0	12.1
2-5	38		6	31.4
6-10	17	2	8	19.3
11-20	11		8	13.6
21-30	4		1	13.6
>30	2		3	3.6
All FWR experiences	n=111	n=2	n=27	N=140
none	50	0	9	42.1
1	13	1	2	11.4
2-5	29	0	6	25.0
6-10	9	0	2	7.9
11-20	8	0	2	7.1
21-30	0	1	0	0.7
>30	2	0	6	5.7
FWR education	n=111	n=2	n=27	N=140
yes	24	1	7	22.9
no	87	1	20	77.1

Table 2
Phase II Demographic Data

Characteristic	RN Pre-ed	PA Pre-ed	MD Pre-ed	n	Total %	RN Post-ed	Total %
Gender	n=81	n=4	n=9	94		n=25	n=25
Female	71	2	1	74	78.7	23	92
Male	10	2	8	20	21.3	2	8
Yrs in practice							
0-5	23	3	0	26	27.7	2	8
6-10	11	0	1	12	12.8	2	8
11-15	7	1	1	9	9.7	3	12
>15	39	0	7	46	49.5	18	72
Practice location							
Emergency	15	3	9	27	27.4	1	4
Critical Care	22			22	24.2	8	32
Progressive care	10			10	11.0	6	24
Pediatric	14			14	15.4	3	12
Med/Surg/Ortho	15			15	16.5	2	8
Management	5			5	5.5	5	20
RN education (n=80)							
Associate's degree	30			30	37.5	12	48
Diploma	10			10	12.5	1	4
Bachelor's degree	37			37	46.2	12	48
Master's degree/PhD	3			3	3.8	0	
CPR past year							
none	26	0	1	27	28.7	4	16
1	6	0	0	6	6.4	4	16
2-5	22	1	0	23	24.5	6	24
6-10	12	3	2	17	18.1	8	32
11-20	10	0	4	14	14.9	2	8
21-30	5	0	0	5	5.3	1	4
>30	0	0	2	2	2.1	0	0
All FWR experiences							
none	35	0	0	35	37.2	6	24
1	5	1	0	6	6.4	3	12
2-5	21	1	1	23	24.5	7	28
6-10	8	1	1	10	10.6	4	16
11-20	7	0	1	8	8.5	3	12
21-30	1	1	0	2	2.1	0	0
>30	4	0	6	10	10.6	2	8
FWR education							
yes	22	1	5	28	29.8	25	100
no	59	3	4	66	70.2	0	0

CHAPTER THREE

MANUSCRIPT

For Submission to the American Journal of Critical Care

Manuscript requirements

Manuscript content should be laid out in accordance with the Uniform Requirements for Manuscripts Submitted to Biomedical Journals (*N Engl J Med.* 1991;324:424-428).

Clinical and basic research studies - must have structured abstracts of no more than 250 words.

Abstracts must be written in the 3rd person. Abstracts for clinical studies should have the following subheadings: Background, Objectives, Methods, Results, Conclusions.

References should start on a separate page following the text. They must be numbered consecutively by their order of appearance in the text. References cited in figures and tables must be numbered sequentially as if they are cited where the figure or title is first cited in the text. In the text, designate reference numbers either as superscripts or on the line in parentheses. Abbreviate journal titles as found in *Index Medicus*. If in doubt as to the correct abbreviation, cite the complete journal name. Do not use periods in abbreviations of journal titles. List all authors, but if the number exceeds 6, list only the first 3 authors followed by et al.

Title page (double-spaced) includes: Title of manuscript, running title, name, professional credentials, institutional or academic affiliation(s), city and state of all authors in the order intended for publication, name, address, e-mail address, and telephone (home and work) and fax numbers of author to whom correspondence should be addressed. Institution(s) at which the

work was performed. Grant or other financial support used for the study. Key words for indexing: 3 to 5 CINAHL search terms.

Text of manuscript (number as page 1; double-spaced; *do not* include authors' names or institutions in the running head or in the manuscript).

Summary of Key Points and/or bulleted list of practical bedside clinical applications of research findings (4 to 6 items with 2 to 3 sentences serving as introduction) for Clinical Pearls page (include as numbered page; double-spaced on separate sheet).

References (include as numbered pages; double-spaced on separate sheet; follow reference style described in guidelines).

Acknowledgments, disclaimers, sources of financial support (or claim of no conflict of interest; double-spaced).

Tables (double-spaced, 1 per page; numbered consecutively; include title for each), figures, and legends embedded with manuscript for first submission; separated if manuscript accepted.

RUNNING HEAD: FAMILY PRESENCE

FAMILY PRESENCE DURING CARDIOPULMONARY RESUSCITATION:
THE IMPACT OF EDUCATION ON PROVIDER ATTITUDES

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Keywords. Family presence, family-centered care, family witnessed resuscitation, CPR

Abstract

Background Over the past two decades research results have shown that concerns and opinions of clinicians are the primary reasons family presence during cardiopulmonary resuscitation is not offered in the acute-care setting.

Objectives To test the impact of education using evidence-based information on the attitudes of acute care providers toward offering the option of family witnessed resuscitation (FWR).

Methods This 2-phase, before-after correlational study was conducted in a 388-bed academic trauma center, and in a 143-bed community hospital in the Inland Northwest. In phase I, a convenience sample of physicians and registered nurses from both facilities were surveyed about their opinions and beliefs regarding family witnessed resuscitation. Pearson's and Spearman's rho and regression analysis were used to examine relationships between demographic variables and perceptual variables, within and between subgroups. In phase II of the study, clinician subgroups in the community hospital were re-surveyed following an educational program that used evidence-based information. An independent samples t-test was used to compare pre and post-education mean scores of subgroups on indicators of effective teaching strategies and improved FWR support.

Results Nurse and physician concerns in this study sample were consistent with trends identified in previous studies. Post-education mean scores indicated a reduction in opinion-based barriers to FWR, and an overall increase in support by acute care clinicians for offering the option of family witnesses resuscitation.

Conclusions When CPR providers are presented with FWR education, their oppositional

beliefs may be modified, decreasing barriers to family witnessed resuscitation.

Keywords. Family presence, family-centered care, family witnessed resuscitation, CPR

Introduction

The expectation that an individual's family would be present throughout the continuum of life was altered with the advent of institutionalized medicine in the early 20th century. Birth, illness, and death became increasingly attended by physicians and nurses rather than loved ones. However, over the past forty years demands for self-determination and attention to consumer preferences have caused the healthcare community to rethink many traditional practices, including those that exclude families from participating in life's most celebrated, stressful, or sorrowful events. Acute care institutions have been the venue for this interface between the health and social sectors.

The challenge for healthcare leaders has not been in designing new conceptual models of patient care to meet the evolving needs of patients and their families, but in implementing practices that actualize those models. Family-centered care is one model of practice that is commonly used to express commitment to customer service and care excellence.

One of the most controversial topics in the acute care setting is whether to extend family-centered care to include family presence during cardiopulmonary resuscitation (CPR), also termed family witnessed resuscitation (FWR). Based on 20 years of research, numerous professional healthcare organizations have published recommendations in support of offering the option of family presence during cardiopulmonary resuscitation and invasive procedures (1, 2, 3, 4, 5).

Despite these recommendations, and the movement toward family-centered care, an overwhelming majority of acute care facilities in the U.S. have not developed policies or guidelines to facilitate family presence during resuscitation. In a 2003 survey of 984 U.S. hospitals, only 5% had policies addressing FWR (6).

Moving a healthcare system toward accepting FWR as a care standard first requires acceptance by individual healthcare clinicians within a system. Research conducted over the past two decades has shown that the personal beliefs and attitudes of hospital personnel involved in resuscitation efforts are the primary reasons family presence is not offered.

Charged with the responsibility to educate and inform healthcare personnel about changes in lifesaving interventions, procedures, or standards of care, members of the community hospital's code sub-committee chose to examine the evidence surrounding FWR. Their collaborative effort resulted in development of a FWR guideline (figure 1). Due to the controversial nature of the FWR concept, it was understood that ensuring support of the concept by CPR providers would require evaluation of local provider attitudes about FWR, and a planned approach for staff education.

The intent of this before-after quantitative study was two-fold. Phase I sought to establish local trends in provider attitudes toward offering the option of family presence during resuscitation. The purpose of phase II was to test the effect of an educational program that used evidence-based information for improving acceptance of family presence during resuscitation efforts by CPR providers. The educational program integrated teaching and leadership strategies based upon Lewin's Change Theory.

Conceptual Framework

Lewin's Change Theory (7) is a classic framework for change that includes a systematic, problem-solving method to facilitate change. According to Lewin's theory, in order to initiate, or manage a change, the situation is analyzed by the change agent early and continually for potential forces that may be both barriers and facilitators of change (8). Barriers, also termed restraining forces, pull systems away from change, while driving forces are conditions that move systems toward change. The role of the change agent is to first disrupt system equilibrium by exposing the need for change, then re-establishing a new equilibrium by reducing the relative strength of barriers, while supporting actions that facilitate change (8, 9).

In this case, barriers to change were initially drawn from results of published survey studies that described common nurse and physician attitudes toward FWR. Data from studies that examined the effects of FWR on families and patients, professional organization recommendations, and an opportunity to include FWR as an extension of family-centered care, were considered by the facility sub-committee to be valid driving forces for change. Abstracted from the literature, these same restraining and driving forces were applied to an evidence-based power-point program modified from the Emergency Nurses Association (10). In addition to presenting study findings as restraining or driving forces for FWR, literature was presented that addressed ethicolegal issues, also identified in prior survey studies as barriers to FWR.

Literature Review

The English-language literature was searched using CINAHL-EBSCO, Ovid, and

Medline data bases, using the key words and phrases “family presence,” “cardiopulmonary resuscitation,” “CPR,” and “family-centered care.” Article bibliographies were also reviewed to obtain additional references. Published, peer-reviewed quantitative, descriptive, and retrospective studies, and articles that provided anecdotal evidence, were evaluated for their relevance and currency.

Restraining forces

Specific provider concerns are cited repeatedly in the literature. These include anticipated emotional trauma to families witnessing resuscitation efforts (6, 11, 12, 13,14, 15, 16), fear of litigation by families (6, 11, 14), discomfort in being observed by family members (12, 14, 15, 16), the potential for a negative influence on team performance and team communication (12, 14), issues of security and confidentiality (14), a lack of individual or institutional experience in caring for patients and families from diverse cultures (13), and the fear of family interference in the resuscitation process (6, 11, 12, 13, 14, 16). In order to guide discussions during staff education about FWR, it was important to understand the demographic origins of these strong oppositional opinions.

In studies specific to nursing, positive correlation was found between acceptance of FWR and higher educational levels or specialty certification (13), and between nurses’ self-confidence in caring for families during CPR and their support of FWR (17). In some studies, surveys of FWR preferences and practices showed overall support of FWR by both nurses and physicians who had prior experience with FWR (6, 12). The greatest support of FWR was found in emergency nurses, a group who commonly integrate family members into the care environment (13, 17).

Results from surveys of physicians varied. In some studies there was an overall opposition by physicians of FWR, for both pediatric and adult events (14). Others showed that slightly more physicians were opposed than in support of FWR, with the greatest opposition among attending physicians (12). Citing Hill, Knapp (18) attributes the opposition by physicians who are experienced in FWR to a lack of training in palliative, end-of-life, and bereavement care during medical training. In other surveys involving physicians, there was overwhelming support by experienced physicians, and opposition to FWR by resident physicians and those with the least experience in dealing with seriously ill children and their families (15, 19).

Driving forces, presented according to their impact on families, patients, and providers.

Family perspective. Research conducted over the course of two decades has shown that most families believe it is their right to have the option of FWR (12, 15). In surveys of family members who were not given the option of FWR, most would like to have been given the option (20, 21, 22). Survey studies of families who accepted the option to be present during resuscitation show that if in a similar situation, most family members would chose to participate in FWR again (15, 23) .

Emotional benefits. Peberdy, et al. (24) examined data from 86,748 reported cases of in-hospital cardiac arrests, finding rates of survival to discharge ranged from 14.7% during nighttime hours to 19.8% during the day. As stated by Westlien and Nilstun (25), for many families, resuscitation efforts are often an end-of-life event, and the last opportunity

to be near during a loved one's final moments. The emotional benefit of FWR on family members is the predominate conclusion in quantitative studies, retrospective interviews, and anecdotal accounts.

Results from numerous retrospective interviews with surviving family members indicate that despite the unpleasantness of witnessing CPR, family members felt their grief was eased by being present during the resuscitation effort (11, 12, 15, 20, 23). They also felt that their presence was helpful to the patient (15, 20, 22).

Wagoner (26) interviewed six family members who were not allowed to be near during the resuscitation of their loved one, and found that interfering in a family's need for proximity and vigilance resulted in ineffective post-event coping. When comparing family members who did and did not witness CPR, Robinson (27) found that those who had witnessed resuscitation efforts had lower levels of post-traumatic avoidance behavior, and fewer symptoms of grief than those who did not witness resuscitation efforts. Those who witnessed resuscitation also score lower on the measure of intrusive imagery, indicating that the reality of witnessing resuscitation was less distressing than what they might have imagined had they been excluded from the care area.

Although some studies were limited by sample size, consistent themes of family connectedness were identified; a sense that the patient was aware of their presence, of being helpful by being there for the patient, a feeling of peace or closure, and of grief made easier by the experience. There are no published accounts describing the experiences of families who have been negatively affected by their presence during CPR. *Patient perspective.* There are significant gaps and limitations in the research about what

patients would prefer, as survival rates for CPR are generally low. Evaluation of what little information that is available indicates that patients may have similar needs for family connectedness during medical crises and life-threatening events. Patients also felt that the proximity of a family member would be comforting (13, 28), and remind providers of their “personhood” (28). Patients believed that it was their right to have their loved one(s) present, and that the option should be made available (12, 27).

Provider perspective. Statements by providers experienced with FWR included the opinion that FWR encourages more professional behavior at the bedside, reducing unnecessary or inappropriate statements (15). Providers believe that FWR gave them an opportunity to educate the family about the resuscitation process, and assist the family to understand the severity of the patient’s condition, which some believed could result in a decreased risk for lawsuits. Having the family present was also thought by providers to convey a sense of “personhood,” reminding the team to consider the patient as a member of a family (15, 27), and improved the team’s consideration of the patient’s privacy and need for pain management. They believed FWR helped the family to appreciate that all was done, by witnessing and knowing it was so, resulting in a decrease in their uncertainty and better peace of mind (15). Nurses stated that allowing FWR provided families an opportunity for closure, and a meaningful way of meeting the family members’ emotional and spiritual needs. FWR also gave them the ability to advocate for family members (15), and believed that FWR allowed them to support families making end-of-life decisions based on quality of life (13).

Ethicolegal issues

There is no documentation that FWR either increases or decreases litigation risk (29). Because there is no evidence that FWR has resulted in adverse outcomes, litigation, or patient/family harm, and there is research documenting benefits to FWR, Blair (29) opines that rather than increase the risk of litigation by allowing FWR, providers may increase the risk of legal liability by disallowing family presence when it is requested.

Another concern is that FWR may be a violation of a patient's right to privacy (16). It has been suggested that patient preferences for FWR be included in medical advanced directives (14). Unless those wishes are specifically known or documented, legitimate surrogates, who may have a better understanding of the patient's values and beliefs, should be permitted to make FWR decisions in the patient's best interest (30).

Benner (31) states that being a good practitioner requires that healthcare professionals form helping relationships and engage in ethical reasoning, not merely function out of obligation or tradition, and not merely possess technical expertise. Unfortunately, few resuscitation events end well, and some providers are concerned that the potential impact on patient outcome is a moral reason to deny FWR (14). Day (32) argues that FWR is a matter of value, not a matter of ethical debate, and suggests that the question of allowing FWR should not begin with the assumption that families should be excluded until benefit is proven. If family involvement were considered a valuable component of patient care, rather than an intrusion, then the burden of adjusting to the presence of family would lie with individual clinicians, and it would be their own discomfort that creates personal distractions (32).

Methods

Setting. Settings for phase I of the study were the emergency departments and all bedded units in two associated acute-care hospitals in the Inland Northwest; an urban 388-bed level-2 trauma academic hospital, and a 123-bed level-3 trauma community hospital. Phase II of the study was conducted exclusively in the non-academic facility. Neither study site had a policy or guideline for family presence during invasive procedures or resuscitation prior to the study.

Selection and description of participants. Approval to electronically contact potential subjects for recruitment into the study, and permission to distribute the surveys, was granted by each facility's senior nurse executive officer. To be included in either phase of the study, subjects had to be English speaking and hold a current license as a registered nurse or physician in the state of Washington.

In phase I, a convenience sample was recruited from all physicians in the emergency departments, and registered nurses in the emergency departments all bedded units of both facilities. Physicians training in the internal medicine and family practice residency programs were also invited to participate. Surveys were placed in unit-specific employee mailboxes for nurse and physician employees by the researcher and educator. Resident physician surveys were distributed by program directors. Employees were also contacted electronically by the researcher and asked to participate in the survey.

Phase II surveys were distributed by the researcher to all attendees prior to the FWR education presentation. Attendees who had completed a survey for phase I of the study were asked not complete another pre-education survey. All attendees of the FWR

education program were invited to complete a post-education survey. Consent to participate in any phase of the study was implied by return of a completed survey. Participation was voluntary and anonymous, and confidentiality was assured.

Technical information

Design. The study's phase I demographic survey provided data for a non-experimental, descriptive design. Results of phase II pre and post-education surveys were used to obtain quantitative comparative data. Overall, the study meets the definition of a before-after correlational design. The researcher was certified in basic human subjects research. The study was approved by the Institutional Review Board. Exemption to full IRB review was granted, as the study data met all criteria as posing a low risk to participants.

Instruments. Page one of the survey collected demographic variables, and data regarding respondents' experience in resuscitation and FWR.

Page two of the survey was adapted with permission from the Emergency Nurses Association (10). Using a 4-point Likert scale, respondents indicated their agreement with 10 statements related to the effects of FWR on patients, family members, event outcomes, and their personal comfort with the FWR concept. Answer options ranged from strongly disagree (1) to strongly agree (4) (figure 2).

Surveys were pilot-tested by five critical care nurses with clinical experience ranging from less than one year to over 15 years. Those who pilot-tested the survey were asked to comment on readability of the proposed questions and overall survey format. Minor changes in terminology and layout were made. There was also a request to include a fifth scale option for "undecided" or "unknown." The investigator decided that

respondents would be more likely to offer subjective comments in a dedicated section of the instrument if a neutral option was not made available.

Content validity of the survey questions was established by a panel of three masters and doctorally prepared nurses with extensive critical care and/or research experience. A four-point Likert scale was used to rate each of the ten study questions from 1-4, with a 3-4 rating indicating acceptability of each question for examining providers' beliefs about barriers and benefits of FWR in the acute care setting, and of provider attitudes FWR. Similar survey tools used by Duran (12) and Mian (16) were also deemed valid through expert review.

Eight survey questions were chosen as perceptual variables of provider support of FWR; questions 1, 2, 3, 4, 5, 6, 9, and 10. Questions 1, 2, 4, 5, and 6 were reverse coded. The overall internal reliability of these eight variables was established with a Cronbach Alpha value of .884. For Phase II, questions 1, 2, 3, 4, 6, 7, 9, and 10 were chosen as perceptual indicators of teaching effectiveness and FWR support. These questions had a Cronbach Alpha value of .882.

Data Analysis. The collected surveys were coded and visually checked for completeness, then double-entered into separate computer files by the investigator and clinical educator. The two sets of data were visually inspected for inconsistencies, and if found, the original instrument was reviewed and corrections were made. Frequencies were obtained for demographic data. Pearson's and Spearman's rho correlations, and regression analysis, were used to analyze relationships between demographic variables and chosen perceptual variables within and between subgroups in phase I. For phase II, independent and single

samples t tests were used to compare the pre and post-education mean scores of the variables chosen to represent effective education and support of FWR. The SSPS version 16 statistical package was used for all data analyses.

Results

Phase I surveys were returned by 140 subjects. The 90 surveys returned from the urban facility were analyzed and set aside. The 50 phase I surveys from the community hospital were added to an additional 44 surveys returned in phase II prior to education. Post-education surveys were returned by 25 nurses. No post-education surveys were returned from physicians, therefore no data is available for comparative analysis for that group. Descriptive statistics for subjects in all phases of the study are presented in tables 1 and 2. Phase I mean scores for indicators of FWR barriers (questions 1, 2, 3, 4, 5, 6, 9, & 10) are presented in tables 3 by sub-group. Phase I correlational values for FWR support (questions 9 & 10) are presented in table 4. Phase 2 post-education mean scores for nurses, on perceptual indicators of teaching effectiveness (questions 1,2,3,4,6, & 7) and FWR support (questions 9 & 10), are presented in table 5. Table 6 shows the impact of education on mean scores before and after FWR education, by indicators of effective education (questions 1,2,3,4,6, & 7) and FWR acceptance (questions 9 & 10). Overall changes in mean scores for all phase II subjects, before and after FWR teaching, is shown in table 7.

Discussion

Phase I. Patterns of provider opinions were similar in this region to those found in previous studies. The data provided comparative information about how professional

roles, clinical location and experience, and educational level may influence provider attitudes and opinions.

Emergency physicians accounted for the majority of physicians with both professional experience and experience with CPR and FWR. These variables were found to be strongly correlated to indicators of support for FWR, however the lack of practice location variability may skew these results. A notable finding is the strong correlation between fewer years of professional practice, low scores in all variables indicating barriers to FWR, and significantly less support in FWR as an option or a patient/family right. In academic hospitals where resident physicians are assigned responsibility for leading and managing resuscitation events, these findings may be especially concerning to those working toward FWR as an accepted practice. The high percentage of inexperienced physicians in the sample made comparison between professions unreliable.

Unlike the physician group, years of practice was not a significant factor for nurses in their support of FWR. As in prior studies, it was experience with CPR and prior FWR events that correlated with increased support of FWR. This is reflected in higher scores among critical care and emergency nurses, when compared to those working in less acute settings. Prior studies showed that nurses were generally more supportive than physicians. In this study the high percentage of inexperienced physicians makes group comparisons unreliable. Emergency physicians and nurses with more experience in CPR and FWR similarly had fewer barriers and more support of FWR.

Few studies have examined the results of family presence education on provider attitudes. In a study by Henderson and Knapp (33), support of FWR by medical experts

was shown to significantly increase following review of published literature and discussions about the topic. Mian et al. (16) found that nurses had a substantial change in attitude following education that incorporated current research findings, a family's personal account of a FWR experience, and group dialogue.

In phase I, only 22.9% (32/140) of acute care clinicians had prior education about FWR, with nearly identical frequencies among physicians and nurses. In both physician and nurse groups, having prior education about FWR improved overall scores for supporting FWR as an option and as a patient/family right, when compared to those without prior education. Following data analysis, phase I data from the larger facility (n=90) was set aside for use in future studies or for facility-specific purposes.

Phase II. Post-education data from nursing groups in phase II were analyzed to answer the study question of whether an evidenced-based education program would impact provider support of FWR. Higher scores in support of FWR as an option, and FWR as a patient/family right, were deemed to be indicators of overall support. Other variables were examined to determine the effectiveness of the teaching strategies in communicating research findings and alleviating opinion-based concerns.

Regarding indicators of FWR barriers, post-education group mean scores were higher than the pre-education scores from providers who had never had FWR education, and slightly higher than the mean scores of those who had FWR education prior to this study. Without the knowledge of prior teaching methods, it is not possible to attribute this difference to any particular aspect of this study's education strategy. A similar program, presented by another individual, may have different results. In this study, the

difference in pre and post-education scores shows that providers were receptive to evidence-based information, and may have altered their opinions accordingly. Comparison within the nursing group was deemed unreliable due to poor return rates by location.

Both of the perceptual indicators of FWR support improved following education. However, of the two, providing the option of FWR was slightly more agreeable to clinicians than was the opinion that FWR was a patient or family right. The fiduciary duty of healthcare providers to prioritize optimal patient outcomes was discussed by providers in each teaching session. Although offering the option was overwhelmingly supported, many clinicians expressed that “the right circumstances,” as determined by an exclusion or inclusion criteria, prioritized the welfare of the patient over FWR rights, and improved their overall support of FWR as an option. The presence of a family facilitator was also cited by providers as having a positive impact on their support of presenting the option of FWR to family members.

Strengths and Limitations

The study was limited due to the time between study phases. Over the course of six months, changes in staff rosters could result in attrition of pre-education phase I subjects from participation in phase II post-education surveys. Because phase I subjects did not complete a pre-education survey immediately prior to education, bias of maturation was also possible. Some subjects may have altered their opinions based upon independent investigation or discussions about the topic, rather than as a result of the educational presentation alone.

The study was limited to examination of the impact of education on clinician subgroups, therefore a change in study methodology to examine the results of FWR education with individual clinicians may prove insightful. Subjects were permitted to return their post-education surveys at a later time, rather than have them collected immediately following the presentation. This may account for the poor return of post-education data, and should be considered in the design of similar before-after survey studies. Cultural, ethnic, and spiritual variability of subjects were not measured. These variables could be significant in some geographical areas, and may provide useful information about how personal beliefs and values affect pre and post- education acceptance of FWR.

Interventional fidelity was achieved by utilizing a standardized presentation format for all subgroups. To reduce the risk of investigator bias, the educational program was designed to present both oppositional and supportive points of view taken from the available literature. The study questions were masked from the subjects to reduce the risk of awareness bias.

Sample subgroups were selected to be representative of those found in other hospitals in which the study findings may apply. The study fills a gap in the current literature by surveying clinicians outside of critical and emergency care settings, and conducting the study within a non-academic facility.

Recommendations

When developing FWR guidelines, policy-makers might evaluate potential institutional and clinician barriers to FWR unique to their facility or region. When

developing policy, recommendations made by prior researchers should be considered: Formation of a multidisciplinary consensus for structured guideline development (18), a family presence criteria (15, 33), an assigned facilitator role (3, 15), legal review of the policy prior to implementation (33), and plans for staff education about FWR processes and rationale (3).

To facilitate acceptance of FWR, education that alleviates barriers based on opinion, tradition, and paternalistic care models, is recommended prior to moving FWR forward as an institutional policy. Education about family-centered care and FWR should be incorporated into nursing and physician academic curricula. As more hospitals adopt FWR guidelines, researchers will have more opportunities to study the effect of policies or guidelines on provider performance, and family and patient perceptions.

Conclusion

The success of adopting family presence guidelines may be greater if clinicians are presented with evidence-based data and ethical reasoning that address common provider concerns. The objective of structured FWR guidelines is to recognize the rights of patients and families, and respect the patient-family relationship, while maintaining a system that protects the integrity of the patient care environment.

As illustrated by this and other studies, pre-education opinions on FWR vary within and between realms of practice, with the strongest variable being prior experience with FWR. As more hospitals chose to have formal guidelines for FWR, and more clinicians gain experience and promote its value, offering the option of family presence during resuscitation may become a common-place component of family-centered care.

Summary of Key Points

- One of the most controversial topics in the acute care setting is whether to extend family-centered care to include family presence during cardiopulmonary resuscitation.
- Pre- education opinions on FWR vary within and between realms of practice, with the strongest variable being prior experience with FWR.
- Moving a healthcare system away from excluding family members during CPR toward accepting FWR as a care standard first requires acceptance by individual healthcare clinicians within a system.
- The success of adopting family presence guidelines may be greater if clinicians are presented with evidence-based data and ethical reasoning that address common provider concerns.
- The objective of structured FWR guidelines is to recognize the rights of patients and families, and respect the patient-family relationship, while creating a system that protects the integrity of the patient care environment

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Figure 1
Family Presence During Resuscitation Guidelines

- Statement: In an appropriate set of circumstances, family members will be offered the option of being present during resuscitation efforts.
- Definitions: **Family:** a related or unrelated person with whom the patient shares an established relationship.
Family Facilitator: A role primarily filled by the Nursing Supervisor, with secondary support by the Social Worker or Chaplain on duty. The facilitator is dedicated to the family during and after a resuscitative event. The family facilitator responds to codes to assess the ability of the family to cope with the situation, provides medical explanations to the family of events occurring during resuscitation, and assists in providing emotional support during and following the code event.
Family Presence: the presence of family in the patient care area, in a location that affords visual or physical contact with the patient during resuscitation events.
Resuscitation: a sequence of events that are initiated to sustain life or prevent further deterioration of the patient's condition.
- Procedure: When a Code 55 is called, a family facilitator will respond.
- Nursing Supervisor: 7 days, 24 hours
 - Social Worker: Monday through Friday 0700 – 1600
Saturday 0800 - 1400
 - Pastoral Care: Hours vary, on-call 7days, 24 hours
The social worker or on-call chaplain may be paged through the hospital operator as needed for code events.
1. **Consult with the Code leader:** If the patient is conscious, and the direct care providers agree that family visitation is possible, the patient will be asked if he/she wishes to have family members present.
Upon their arrival, the Family Facilitator will first identify the Code Leader (physician) and ask if the family can be present. If the Code Leader agrees to family presence, the family facilitator will then approach the family to provide information about the patient's status and response to treatment, and evaluate whether family members are suitable candidates before family presence is offered.
2. **Assess family members:** Family members will be assessed for appropriate levels of coping and the absence of combative behavior, extreme emotional instability, behaviors consistent with altered mental status and cognitive impairment (ie. mental or emotional disabilities). The number of family members allowed into the patient's room

during a resuscitative event will be decided by the Code Leader based on the individual situation. When prioritizing family member's visitation and determining next of kin, the consent for medical treatment guidelines will be used.

3. Prepare family members: Before entering the patient care area, the family facilitator will explain about the patient's appearance, treatments, and equipment used in the care room. The family facilitator will prepare the family for entering the patient care area by communicating that patient care is the priority, and then explaining how many family members may enter the room, where they may stand/sit, situations in which they would be escorted out of the room (unexpected patient events or family becoming overwhelmed or disruptive), possible time restrictions, that they may leave the room at any time, and any other pertinent factors. In order to maintain the patient's dignity and confidentiality, the facilitator will inform family members allowed into the patient's room that the use of cell phones, cameras or other devices used to take pictures or videos will not be allowed. The facilitator will work with the team to identify the optimal time to bring the family in-ideally within 10 minutes of their arrival

4. Escort family members: The family member(s) will enter the patient care area escorted by the family facilitator. The facilitator will assume responsibility for keeping the resuscitation team knowledgeable of the family's whereabouts. At no time should the family be in close proximity without the team being made aware. The family will not be allowed in the patient care area without a facilitator present.

If appropriate, the family will be provided with personal protective equipment and instructed on its use. They will also be informed where to stand and what not to touch to prevent contaminating the patient or supplies during a sterile procedure.

The family facilitator will:

- Explain interventions
- Interpret medical or nursing jargon
- Provide information about expected outcomes or the patient's response to treatment
- Provide comfort measures, such as a chair at the patient's bedside or tissues
- Provide an opportunity to ask questions
- Provide an opportunity to see, touch, and speak to the patient as directed by the code Team Leader
- Provide frequent updates to the family

If the family member becomes faint, hysterical or disruptive at the bedside, the family facilitator will immediately escort him/her from the area and arrange appropriate supportive care.

After completing the patient visit, the family facilitator will escort the family to a comfortable area, address their questions and concerns, provide comfort measures and address other psychosocial and physical needs identified during the visit.

If staff involved in family presence identify the need for debriefing the case, the nursing supervisor or department manager will be notified for appropriate follow-up.

The family facilitator will communicate needs for family follow-up to Pastoral Care Services.

Figure 2

Presenting the Option for Family Presence during Resuscitation: Provider Survey

Dear Survey Participant,

This survey will be used to examine CPR provider beliefs about **presenting the option for family presence during resuscitation**. Your answers will remain anonymous. Your participation is voluntary, and return of the survey implies your consent to be included in this study. Please answer each question on the survey, and provide only one answer per question. If you would like to share any experiences you have had with family presence during resuscitation your comments will be welcome, but not included in data analysis.

For the purpose of this survey, family presence is defined as **the presence of family in the patient care area, in a location that affords visual or physical contact with the patient during resuscitation events (CPR)**.

Please check the appropriate spaces:

Gender: Male ___ Female ___

Profession: MD ___ APN (ie. ARNP, CNS, CRNA) ___ PA ___ RN ___

Years in practice: 0-5 ___ 6-10 ___ 11-15 ___ >15 ___

Practice Facility: DMC ___ VHMC ___ Both ___

MD / PA / APN area of practice: Emergency Care ___ Critical Care ___ General Inpatient ___

RN area of practice: Emergency Care ___ Adult Critical Care (ICU/CICU) ___ Pediatrics ___ Neonatal Critical Care (NICU) ___ Telemetry/Progressive Care ___ Medical/Surgical ___ Administrative/Management ___

RN education level: ADN ___ Diploma ___ BSN ___ MSN ___ Doctorate/PhD ___

Have you had training or education related to family presence during resuscitation?

Yes ___ No ___

In approximately how many resuscitations have you been directly involved in the past year?

None ___ 1 ___ 2-5 ___ 6-10 ___ 11-20 ___ 21-30 ___ >30 ___

In approximately how many resuscitations have you had prior experience with family presence during CPR?

None ___ 1 ___ 2-5 ___ 6-10 ___ 11-20 ___ 21-30 ___ >30 ___

Circle the number to indicate your agreement or disagreement with the following statements:

	Strongly Disagree	Disagree	Agree	Strongly Agree
1. Witnessing CPR efforts causes emotional trauma to family members	1	2	3	4
2. Family members who witness CPR are more likely to file lawsuits	1	2	3	4
3. Family presence during CPR results in higher rates of family satisfaction with care	1	2	3	4
4. The presence of family members interferes or interrupts care of the patient	1	2	3	4
5. I would feel more anxiety and/or stress with family members present during CPR	1	2	3	4
6. The presence of family members during CPR would inhibit the code team members from communicating freely.	1	2	3	4
7. Family members who witness CPR attempts may suffer fewer psychological difficulties during bereavement.	1	2	3	4
8. I feel comfortable providing psycho-social-spiritual support to family members during CPR situations	1	2	3	4
9. Family members should have the option to be present during CPR	1	2	3	4
10. The option of family presence during CPR is a patient/family right	1	2	3	4

Modified from Emergency Nurses Association (2007)

We welcome your comments:

Table 1
Phase I Demographic Data

Characteristic	Nurses	PA	Physicians	Total %
Gender	n=111	n=2	n=27	N=140
Female	93	1	13	76.4
Male	18	1	14	23.6
Yrs in practice	n=110	n=2	n=27	N=139
0-5	24	1	17	30.2
6-10	21	0	0	15.1
11-15	14	1	3	12.9
>15	51	0	7	41.7
Practice location	n=111	n=2	N=27	N=140
Emergency	17	2	13	22.8
Critical Care	25		1	18.6
Acute/Progressive care	17			12.1
Pediatric/NICU	17			12.1
Med/Surg/Ortho	35			25.0
General inpatient			13	9.3
RN education	n=111			N=111
Associate's degree	34			30.6
Diploma	16			14.4
Bachelor's degree	56			50.4
Master's degree/PhD	5			4.5
CPR past year	n=111	n=2	n=27	N=140
none	22		1	16.4
1	17		0	12.1
2-5	38		6	31.4
6-10	17	2	8	19.3
11-20	11		8	13.6
21-30	4		1	13.6
>30	2		3	3.6
All FWR experiences	n=111	n=2	n=27	N=140
none	50	0	9	42.1
1	13	1	2	11.4
2-5	29	0	6	25.0
6-10	9	0	2	7.9
11-20	8	0	2	7.1
21-30	0	1	0	0.7
>30	2	0	6	5.7
FWR education	n=111	n=2	n=27	N=140
yes	24	1	7	22.9
no	87	1	20	77.1

Table 2

Phase II Demographic Data

Characteristic	RN Pre-ed	PA Pre-ed	MD Pre-ed	n	Total %	RN Post-ed	Total %
Gender	n=81	n=4	n=9	94		n=25	
Female	71	2	1	74	78.7	23	92
Male	10	2	8	20	21.3	2	8
Yrs in practice							
0-5	23	3	0	26	27.7	2	8
6-10	11	0	1	12	12.8	2	8
11-15	7	1	1	9	9.7	3	12
>15	39	0	7	46	49.5	18	72
Practice location							
Emergency	15	3	9	27	27.4	1	4
Critical Care	22			22	24.2	8	32
Progressive care	10			10	11.0	6	24
Pediatric	14			14	15.4	3	12
Med/Surg/Ortho	15			15	16.5	2	8
Management	5			5	5.5	5	20
RN education (n=80)							
Associate's degree	30			30	37.5	12	48
Diploma	10			10	12.5	1	4
Bachelor's degree	37			37	46.2	12	48
Master's degree/PhD	3			3	3.8	0	
CPR past year							
none	26	0	1	27	28.7	4	16
1	6	0	0	6	6.4	4	16
2-5	22	1	0	23	24.5	6	24
6-10	12	3	2	17	18.1	8	32
11-20	10	0	4	14	14.9	2	8
21-30	5	0	0	5	5.3	1	4
>30	0	0	2	2	2.1	0	0
All FWR experiences							
none	35	0	0	35	37.2	6	24
1	5	1	0	6	6.4	3	12
2-5	21	1	1	23	24.5	7	28
6-10	8	1	1	10	10.6	4	16
11-20	7	0	1	8	8.5	3	12
21-30	1	1	0	2	2.1	0	0
>30	4	0	6	10	10.6	2	8
FWR education							
yes	22	1	5	28	29.8	25	100
no	59	3	4	66	70.2	0	0

Table 3.

Phase I: Physician and RN Mean Scores on Perceptual Indicators of FWR Support

Scores 1.0 – 4.0 Higher Scores = Fewer barriers to FWR

MD by yrs practice	Q1R	Q2R	Q3	Q4R	QR5	Q6R	Q9	Q10
0-5 n=17	1.8750	2.8667	2.50	1.8750	1.7647	1.8235	2.25	2.06
11-15 n=3	2.0000	3.0000	3.00	2.6667	1.6667	2.3333	2.67	2.67
>15 n=7	2.5714	3.7143	3.57	3.1429	3.2857	3.1429	3.14	2.86
MD by location	Q1R	Q2R	Q3	Q4R	Q5R	Q6R	Q9	Q10
INPT n=13	1.9231	2.8333	2.46	1.8462	1.8462	1.7692	2.15	2.08
ER n=12	2.3333	3.5000	3.33	2.9167	2.5385	2.7692	3.08	2.75
MD prior FWR educ	Q1R	Q2R	Q3	Q4R	Q5R	Q6R	Q9	Q10
NO n=20	1.9500	3.1053	2.95	2.2000	2.0000	2.0500	2.42	2.26
YES n=7	2.5000	3.1667	2.57	2.6667	2.5714	2.7143	2.86	2.57
MD prior FWR #	Q1R	Q2R	Q3	Q4R	Q5R	Q6R	Q9	Q10
None n=9	1.7500	2.5714	2.25	1.3750	1.1111	1.5556	2.00	2.00
1 n=2	2.0000	3.5000	3.00	2.5000	2.5000	2.5000	3.00	2.50
2-5 n=6	2.1667	3.1667	3.00	2.5000	2.5000	2.1667	2.17	1.83
6-10 n=2	1.0000	3.0000	3.00	2.0000	1.0000	1.5000	1.50	1.00
11-20 n=2	1.5000	3.0000	3.00	2.5000	2.5000	2.5000	3.00	3.50
>30 n=6	3.0000	3.6667	3.33	3.3333	3.5000	3.3333	3.67	3.33
MD CPR events	Q1R	Q2R	Q3	Q4R	Q5R	Q6R	Q9	Q10
None n=1	1.0000	4.0000	4.00	3.0000	1.0000	2.0000	2.00	1.00
2-5 n=6	2.1667	3.1667	3.00	2.1667	2.3333	1.8333	2.33	2.00
6-10 n=8	1.7500	2.7143	2.50	1.8750	1.5000	1.8750	2.14	2.12
11-20 n=8	2.2857	3.2857	3.00	2.5714	2.5000	2.7500	2.75	2.50
21-30 n=1	3.0000	4.0000	3.00	3.0000	4.0000	3.0000	4.00	4.00
>30 n=3	2.3333	3.0000	2.67	2.6667	2.3333	2.3333	3.00	3.00

RN by yrs practice	Q1R	Q2R	Q3	Q4R	Q5R	Q6R	Q9	Q10
0-5 n=24	2.0417	2.7917	2.54	2.3750	2.3333	2.7083	3.00	2.88
6-10 n=21	1.6190	2.6500	2.50	2.2857	2.1429	2.1429	2.71	2.43
11-15 n=14	1.7857	2.6429	2.71	2.2857	2.1429	2.1429	2.79	2.43
>15 n=51	2.0652	2.8085	2.56	2.4681	2.3878	2.3400	2.78	2.70
RN by location	Q1R	Q2R	Q3	Q4R	Q5R	Q6R	Q9	Q10
M/S n=35	1.6364	2.6970	2.25	2.2647	1.9714	2.2000	2.64	2.35
NICU n=12	1.8333	2.8182	2.33	2.3333	2.0000	2.0000	2.33	2.36
PEDS n=5	2.2500	2.8000	2.60	2.0000	2.2500	2.5000	2.80	2.67
ACU n=12	1.8333	2.7500	2.42	2.0833	2.0000	2.1667	2.50	2.50
PCU n=5	2.2000	2.0000	2.80	2.0000	2.8000	2.8000	3.20	3.00
ICU n=25	2.0833	2.6250	2.79	2.3913	2.5000	2.4000	2.92	2.83
ER n=17	2.3125	3.1176	3.00	3.1875	2.9412	2.8235	3.41	3.12
RN prior FWR educ	QR1R	Q2R	Q3	Q4R	Q5R	Q6R	Q9	Q10
N n=87	1.8434	2.6747	2.49	2.2941	2.1628	2.2907	2.70	2.57
Y n=24	2.2609	3.0000	2.79	2.7727	2.7826	2.5833	3.17	2.91
RN prior FWR #	Q1R	Q2R	Q3	Q4R	Q5R	Q6R	Q9	Q10
None n=50	1.8085	2.6667	2.43	2.3061	2.1020	2.2653	2.52	2.50
1 n=13	2.3077	2.7692	2.69	2.3077	2.2308	2.0769	2.69	2.31
2-5 n=29	1.8148	2.7692	2.61	2.3077	2.2857	2.3448	3.00	2.86
6-10 n=9	1.5556	2.4444	2.56	2.5556	2.5556	2.6667	3.22	2.56
11-20 n=8	2.7500	3.3750	2.87	2.8750	3.0000	3.0000	3.38	3.12
>30 n=2	2.5000	3.0000	3.00	3.5000	3.5000	2.5000	3.50	3.50

RN CPR events	Q1R	Q2R	Q3	Q4R	Q5R	Q6R	Q9	Q10
None n=22	1.8095	2.6667	2.52	2.1818	2.1429	2.3333	2.80	2.75
1 n=17	1.4000	2.7333	2.20	2.2500	1.9412	2.1176	2.56	2.50
2-5 n=38	1.9459	2.5833	2.41	2.1944	2.1622	2.2368	2.61	2.59
6-10 n=17	2.1176	3.0588	2.82	2.7647	2.5294	2.4706	2.88	2.47
11-20 n=11	2.4000	3.0000	2.91	3.0909	2.8182	2.6364	3.27	2.90
21-30 n=4	2.5000	2.2500	3.00	2.2500	2.7500	2.7500	3.50	2.75
>30 n=2	2.0000	3.5000	3.50	3.0000	3.5000	3.5000	4.00	3.50

Table 4.

Phase I Correlation between Years of Practice, CPR events and FWR experiences, to support of FWR as an option (Q9) and as a patient/family right (Q10)

MD Correlations

		YrsPrac	CPRno	FWRno
Q9	Pearson Correlation	.397*	.332	.602**
	Sig. (2-tailed)	.045	.098	.001
	N	26	26	26
Q10	Pearson Correlation	.363	.458*	.523**
	Sig. (2-tailed)	.068	.019	.006
	N	26	26	26

RN Correlations

		YrsPrac	CPRno	FWRno
Q9	Pearson Correlation	-.075	.252**	.355**
	Sig. (2-tailed)	.443	.008	.000
	N	107	108	108
Q10	Pearson Correlation	-.034	.059	.218*
	Sig. (2-tailed)	.730	.551	.025
	N	105	106	106

** Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed)

Table 5
Phase II: Post-Education RN Mean Scores on Perceptual Indicators of
Effective FWR Education (Q1,2,3,4,6,7) and FWR Support (Q9,10).

Scores 1.0 – 4.0 Higher Scores = Fewer barriers to FWR following Education

RN by years practice		Q1R	Q2R	Q3	Q4R	Q6R	Q7	Q9	Q10
0-5	n=2	3.50	4.00	4.00	4.00	4.00	3.50	4.00	4.00
6-10	n=2	2.50	3.50	3.00	3.50	3.00	3.00	3.50	3.00
11-15	n=3	3.00	3.00	3.00	3.33	3.33	3.00	3.33	2.67
>15	n=18	2.88	3.33	3.17	3.16	3.11	3.22	3.67	3.39
By location		Q1R	Q2R	Q3	Q4R	Q6R	Q7	Q9	Q10
ER	n=1	2.00	3.00	3.00	3.00	2.00	3.00	3.00	2.00
ICU	n=8	3.00	3.75	3.50	3.50	3.50	3.50	3.88	3.50
MGMT	n=5	3.20	3.00	2.80	3.20	3.20	3.00	3.60	3.60
MedSurg	n=2	3.50	3.50	3.50	3.50	3.00	3.00	3.50	3.00
PCU	n=6	2.66	3.16	3.17	3.00	2.83	3.17	3.50	3.33
PEDS	n=3	2.66	3.33	3.00	3.33	3.66	3.00	3.67	3.00
By FWR #		Q1R	Q2R	Q3	Q4R	Q6R	Q7	Q9	Q10
None	n=6	3.00	3.50	3.33	3.16	3.00	3.33	3.67	3.50
1	n=3	2.66	3.00	3.00	3.00	3.00	3.00	3.33	2.67
2-5	n=7	2.71	3.28	3.14	3.14	3.00	3.14	3.57	3.29
6-10	n=4	3.25	3.50	3.50	3.75	3.75	3.25	3.75	3.00
11-20	n=3	2.66	3.00	3.33	3.00	3.00	2.67	3.67	3.67
>30	n=2	3.50	4.00	2.50	4.00	4.00	4.00	4.00	4.00

By CPR events		Q1R	Q2R	Q3	Q4R	Q6R	Q7	Q9	Q10
None	n=4	3.00	3.50	3.25	3.25	3.50	3.50	4.00	3.50
1	n=4	2.50	3.00	3.00	3.00	2.75	3.00	3.25	2.75
2-5	n=6	3.00	3.50	3.33	3.33	3.16	2.83	3.50	3.50
6-10	n=8	3.00	3.50	3.12	3.50	3.37	3.50	3.75	3.25
11-20	n=2	3.00	3.00	3.00	3.00	3.00	3.00	3.50	3.50
21-30	n=1	3.00	3.00	4.00	3.00	3.00	3.00	4.00	4.00
>30	n=0								

Table 6
Phase II: Impact of Education on Mean Scores Before and After FWR Education
On barriers (Q1R,2R,3,4R,6R,7) and FWR Acceptance (Q9,10)

Item #	Pre-teaching without prior education	Pre-teaching with prior education	Post-teaching
1r	2.062	2.892	2.920
2r	2.761	3.392	3.360
3	2.810	3.290	3.200
4r	2.500	3.102	3.280
6r	2.584	2.928	3.200
7	2.630	2.850	3.200
9	2.920	3.570	3.640
10	2.840	3.290	3.320

Table 7.
 Comparison of Mean Scores for All Phase II Subjects,
 Before and After FWR Education, on barriers and support of FWR

Item #	Sample size	Mean	Std. Deviation	Std. Error Mean
Q1R Before	92	2.3152	.92498	.09644
Q1R After	25	2.9200	.70238	.14048
Q2R Before	91	2.9560	.89333	.09365
Q2R After	25	3.3600	.56862	.11372
Q3 Before	92	2.96	.740	.077
Q3 After	25	3.20	.645	.129
Q4R before	92	2.6957	.93455	.09743
Q4R After	25	3.2800	.61373	.12275
Q6R before	93	2.6882	.85946	.08912
Q6R After	25	3.2000	.64550	.12910
Q7 Before	90	2.70	.741	.078
Q7 After	25	3.20	.577	.115
Q9 Before	94	3.12	.801	.083
Q9 After	25	3.64	.490	.098
Q10 Before	92	2.98	.851	.089
Q10 After	25	3.32	.690	.138