

Outcomes of Family Presence During Resuscitation (FPDR) in the Acute Care Setting: A Review of the Literature

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OUTCOMES OF FAMILY PRESENCE DURING RESUSCITATION (FPDR) IN THE
ACUTE CARE SETTING: A REVIEW OF THE LITERATURE

by

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A thesis submitted in partial fulfillment of the requirements for the Honors in the Major Program
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ABSTRACT

Family Presence During Resuscitation (FPDR) remains controversial and is not consistently implemented during resuscitation events or invasive procedures. Evidence has demonstrated positive outcomes produced by implementation of FPDR; such as, decreased rates of post-traumatic stress symptoms, decreased symptoms of anxiety, and depressive symptoms were not significantly different. Unfortunately, use of FPDR in the acute care setting is not widely accepted or readily implemented. The primary purpose of this integrative literature review is to evaluate the use of FPDR in the acute care setting. The secondary purpose is to evaluate the health care professional's level of perceived value associated with the outcome of having family present during resuscitation. A systematic literature search was conducted using multiple databases for relevant articles in the English language between 2006 to 2017, including Cumulative Index to Nursing and Allied Health Literature (CINAHL), Educational Resources Information Center (ERIC), Elton B. Stephens Co. Host (Ebsco Host), Medical Literature Online (Medline), Psychological Information Database (PsychINFO), and PubMed. Search terms included 'family presence during resuscitation', 'family presence', 'pediatrics', 'nurse perceptions', and 'perceptions'. Ten of the nineteen articles suggest the use of FPDR leads to positive outcomes such as decreased post-traumatic symptoms, and decreased anxiety for family members. The use of FPDR can enhance family members' understanding of resuscitation efforts and involves them in their loved one's care. This integrative review indicates the implementation of FPDR can provide benefits for family members of those undergoing CPR and invasive procedures; although the perceptions of the healthcare team remain the barrier to its use.

DEDICATION

For all nurses, using evidence-based practice
to provide and uphold the standard of nursing care.

For my parents, Gary and Joan,
who have always encouraged me to achieve my goals.

For my partner, Zachary,
who has supported me throughout
the completion of this thesis and the nursing program.

Finally, for my mentors, Dr. Leslee D'Amato-Kubiet, and Ms. Sarah Moore,
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INTRODUCTION

Cardiac arrest accounts for 600,000 deaths annually and places family members who are present during cardiopulmonary resuscitation and invasive procedures at a high risk for emotional burden (Jabre et al., 2013). There is an increased potential for negative psychologic effects when family members are present during the resuscitation efforts of an individual by the healthcare team. However, there can be benefits to family presence during resuscitation (FPDR). Allowing family members to be present during resuscitation can provide understanding of the efforts implemented to sustain the individual's life, gives the family an opportunity to understand the reality of death, decreases levels of anxiety and stress, and provides a feeling of satisfaction to the individual's family. FPDR can also help family members understand their new role as a support system or caregiver to the individual if resuscitation efforts are successful.

Currently, cardiopulmonary resuscitation (CPR) is the standard of care implemented for an individual who has suffered from cardiac arrest. CPR is a combination of repeated compressions of the chest, performed in concurrence with mouth to mouth respirations or the use of special equipment to provide oxygenation to the lungs, in the attempt to restore blood circulation and ventilation. Although, CPR has been in use since 1960, and FPDR was first permitted in 1987, healthcare professionals have been divided about FPDR and reluctant to initiate its use after CPR has been initiated. CPR is used by healthcare providers and lay people in a variety of settings when an individual is unconscious and may need cardiopulmonary support. Despite the abundance of research that shows FPDR has more benefits than harm for the individual in crisis and their family, use of this practice has not been consistent across facilities or widely accepted by the health care culture.

Background

Cardiopulmonary Resuscitation: What is it?

History of Cardiopulmonary Resuscitation and Basic Life Support

Cardiopulmonary resuscitation also known as CPR, is a combination of repeated compressions of the chest, performed in concurrence with mouth to mouth resuscitation or with the use of special ventilatory equipment; as a result, CPR attempts to restore blood circulation and adequate ventilation. The development of CPR dates to 1740 when the Paris Academy of Sciences recommended mouth to mouth resuscitation for drowning victims (American Heart Association, 2017). In 1891, chest compression in humans were first performed and documented to successfully restore blood flow to vital organs; however, successful use of external chest compressions was not disclosed until 1903 by Dr. George Crile. During the year of 1954, James Elam made a significant finding: expired air is essential to maintain adequate oxygenation. In 1960, Basic Life Support (BLS) and the initiation of CPR was instituted as a method of treatment for victims of cardiopulmonary arrest. The American Heart Association (AHA) became the organization to educate healthcare providers in the benefits of BLS algorithms that included CPR and to train both healthcare providers and the public on the techniques of performing CPR. In the early years of BLS, family members were often present during initial resuscitation attempts by default, mostly because they were with the individuals present when cardiopulmonary arrest occurred, or they were the person administering CPR outside the health care setting.

BLS with CPR were widely used after its debut in the 1960's, but after further advancement in life-saving technology, Advanced Cardiac Life Support (ACLS) was developed in 1979 to augment basic CPR. Similar to BLS, ACLS includes the use of pharmacologic and

diagnostic clinical intervention with team dynamics to treat cardiac arrest and other various medical emergencies such as, acute dysrhythmias, stroke, and acute coronary syndromes (AHA, 2017). In contrast, ACLS includes the use of drug therapy usually through an invasive access point with the use of defibrillation to fully attempt restoration of cardiac rhythm.

Elements of Cardiopulmonary Resuscitation

Defibrillation

Defibrillation is the administration of external electrical shock in the attempt to restore the heart into normal cardiac rhythm. Resuscitation can be successful with the use of electrical shock and expired air, whether it be mouth to mouth or with a bag valve mask device. Without concurrent use, resuscitation efforts are less likely to be successful. There are unpleasant side effects with the use of defibrillation for resuscitation, which can cause traumatic psychological effects for the family; such as, the jolting motion of the individual being resuscitated with each shock administration, lack of conduction gel applied before defibrillation can cause the chest hair to be burned causing a displeasing smell, and in emergent situations, an endotracheal tube may not be readily placed, causing body fluids to aggressively leak from the oral cavity. Previously, defibrillation was carried out through the use of paddles to transmit an electrical shock to the individual's thorax, which was visually disturbing to bystanders, however this technique is now obsolete. Today, the healthcare team uses adhesive based, pre-prepared gel pads to facilitate electrical shock to the thorax for cardiac rhythm correction. The complications caused by defibrillation during CPR remain the same, whether paddles or adhesive pads deliver the electric current to the heart muscle and can continue to cause negative psychological effects to family and bystanders that witness resuscitation efforts. With the healthcare team's use of facilitated

therapeutic communication, the family can better understand the efforts made to sustain their loved one's life, and they can be integrated into the individual's care through FPDR.

Who is responsible?

There is a misconception by the public that medical doctors are solely responsible for BLS intervention and the initiation of CPR; however, nurses and the healthcare team are also held accountable for individuals in situations of unconsciousness or cardiac arrest. Nurses are often the first people to respond to cases of cardiac arrest in the clinical setting (Terzi, Polat, & Duzkaya, 2017) which is why nurses are held liable to understand how to administer CPR and to be certified in Basic Life Support (BLS). BLS training is an essential certification for healthcare providers, including nurses, to be appropriately proficient in cardiopulmonary resuscitation. Basic Life Support is critical in reducing the 600,000 cardiac arrests that occur every year; nonetheless, providing the individual with clinical interventions alone is not enough. According to Davidson's middle-range theory Facilitated Sensemaking, as healthcare providers, we need to provide opportunity for family members to be involved in their loved one's care, such as with the use of FPDR.

Providing family members with an understanding

Davidson's theory was used to describe the actions through nursing care and the process families endure when a loved one causes family distress related to the individual's critical illness. Davidson implemented a framework to introduce Facilitated Sensemaking and how it can be used to help families during a time of hardship. Therapeutic communication involves the use of Facilitated Sensemaking which aims to prevent negative psychological outcomes of family members and as a middle-range theory, it promotes direct bedside practice. FPDR can be

integrated into this approach and demonstrate how Facilitated Sensemaking can aid the implementation of FPDR and hinder the reluctance of the healthcare team's viewpoint. Based on FPDR, cardiac arrest may be the cause of family disruption in relation to a critical event; subsequently, families need to understand what has happened and the new role they may take on resulting from the incident. Accordingly, CPR, BLS, and ACLS act as interventions that may assist in the process of Facilitated Sensemaking. Ultimately, the individual's condition can change the need for the family's understanding of what has taken place, and what their role is post-resuscitation. Providing family members with an understanding of FPDR can help prevent negative psychological outcomes and can change the healthcare team's point of view allowing FPDR to be utilized during cardiac arrest.

Benefits

FPDR is still a controversial issue among healthcare providers. Nonetheless, studies have suggested that FPDR can provide several benefits to healthcare providers and the individual's family members. FPDR does not adversely affect communication between members of the health care team, it does not interfere with decision making or care, it promotes a more professional atmosphere, and upholds the dignity of the individual being resuscitated. Two of the nineteen studies found the effectiveness of resuscitation was not affected by the presence of a family member and did not prolong resuscitation efforts. Additionally, FPDR can assist family members with understanding that every possible effort and resource was performed for their loved one (Tudor, Berger, Polivka, Chlebowy, & Thomas, 2014).

Barriers of FPDR

Although research suggests a benefit to FPDR, healthcare professional's perceptions remain ambivalent and doubtful. Several obstacles related to the healthcare team's reluctance to allow family members to be present during resuscitation exist. These include: the healthcare team fears family member interference with the individual's care, performance anxiety may ensue with family presence, fear of emotional distress to the family may occur, and there may be a fear of lawsuit. However, a study was conducted regarding nurses' perceptions of their self-confidence during resuscitation and of the benefits and risks of FPDR. It was found that nurses who perceived their ability to perform resuscitation in a poised and competent manner perceived more self-confidence in their ability to manage family presence (Tudor et al., 2014). In addition, the participants were 'quite confident' or 'very confident' in 15 out of the 17 items of the Family Presence Self-Confidence Scale. The remaining two items in which participants were less confident addressed enlisting physicians' support for FPDR and encouraging client's family members to talk to the individual during resuscitation efforts (Tudor et al., 2014). Furthermore, the survey was completed by 154 participants in which more than half of those believe it is the family's right to be present during resuscitation efforts.

The healthcare team providing care in an unconscious or cardiac arrest situation remains the primary influence on whether family members are included during resuscitation or excused from the procedure. FPDR is not often utilized mainly as the result of negative beliefs from the healthcare team. However, registered nurses are assenting to this practice and are advocating for the individual and their families to make use of family presence more frequent (Carroll, 2014).

Without implementation of FPDR

In many instances, family members are excused or escorted from the room when CPR is implemented by the healthcare team; yet, according to the American Association of Critical-Care Nurses (2016), family members of all individuals undergoing resuscitation and invasive procedures should be given the option to be present at the bedside per the individual's wishes. Subsequently, the American Association of Critical-Care Nurses (AACN) and the Emergency Nurses Association (ENA) recommend all acute-care units have an approved written practice document to allow the option for family presence, but only 5% of nurses surveyed reported having such written policies. Despite numerous recommendations through adequate research and suggestions from the Association of Critical-Care Nurses, FPDR is not used nearly enough.

Before the introduction of FPDR, no policies or protocols were in place regarding family presence; since then, only 5% of nurses reported having written policies in place. Additionally, positive experiences were found following implementation of the protocol and in some instances, there was a drawback of futile resuscitation efforts in response to family members' requests. CPR remains the primary method employed to restore circulation and ventilation during resuscitation, which has been successful, but can lack consistency and reliability between providers. Based on the factors of Davidson's middle range theory Facilitated Sensemaking, the healthcare team is responsible for assisting the integration of family members in an individual's care with clinical care factors, and in aiding the family to define their role throughout the process.

Davidson's Theory

As stated in Davidson's Theory (Figure 1), inclusiveness can transform both the healthcare provider and the family as part of a caring moment during resuscitation and invasive

procedures. Numerous studies have shown that family members have a better understanding of the efforts made for their loved one, anxiety and stress levels decrease, and a sense of relief may be present. In addition, nurses have a higher level of confidence in providing care when family members are present because they believe it is the family's right to be with their loved one. Despite the general, negative perceptions remaining a barrier to the implementation of FPDR, several organizations advocate for FPDR, namely the ENA, and AACN. These organizations are responsible for ensuring quality care for individuals and families. Regarding FPDR, both organizations suggest guidelines for written policy presenting the option of FPDR in healthcare facilities; however, they do not regulate education or implementation of FPDR policy in multidisciplinary care, which often occurs during resuscitation efforts.

PROBLEM

FPDR is controversial and not readily accepted in most instances of cardiac arrest due to healthcare providers' doubts and fears of negative perceptions. In many instances, the benefits of FPDR and its use in the health care setting are not fully recognized or considered feasible by the healthcare team. Although much of the research on FPDR suggests implementation of a support system during invasive procedures can provide significant benefits, FPDR can place family members at a high risk for negative psychological effects and emotional distress. There is no significant evidence that examines the risks of FPDR and if they outweigh the benefits. It is unknown whether any negative psychologic effects of FPDR are more prevalent than the positive outcomes of FPDR and advocates for FPDR support by the health care team, indicating further research is required.

PURPOSE

The primary purpose of this literature review is to evaluate the use of FPDR in the acute care setting. The secondary purpose of this literature review is to examine the healthcare provider's level of perceived value associated with the outcome of having family present during resuscitation. Evidence suggests that FPDR has more positive than negative psychological impacts on the families of individuals being resuscitated. However, there is disconnect between outcome effects during FPDR recognized by the healthcare team and their efforts in sustaining an individual's life.

FPDR is often underutilized in most acute care settings during resuscitation efforts. In a study regarding the impact of education on healthcare providers' attitudes of FPDR it was found the health care providers had more positive perceptions towards FPDR post education, but the sample size was not large enough to support a significant finding (Dwyer, 2016). Additionally, providers remained unwilling to encourage a family support person to enter an individual's room during resuscitation and invasive procedures. There is evidence to support FPDR after education is provided to the healthcare team; however, acceptance of allowing family members to witness resuscitation efforts remains elusive. Understanding the potential of a support system during invasive procedures is crucial in providing individual's and their families with the highest quality of care and treatment. Members of the healthcare team may prefer to exclude family members from an individual's care, but healthcare providers can integrate FPDR when circumstances permit.

METHOD

An integrative review of the literature will be performed that examines the effects of FPDR on the health care team and the family members present during the resuscitation. Key terms used alone and in combination for the literature search will include: “family presence during resuscitation”, “effects”, “benefits”, “health care provider*”, “nurse”, and “perceptions”. Data bases for the search will include: Cumulative Index to Nursing and Allied Health Literature (CINAHL), Educational Resources Information Center (ERIC), Elton B. Stephens Co. Host (Ebsco Host), Medical Literature On-line (Medline), Psychological Information Database (PsychINFO), and PubMed. Inclusion criteria will consist of peer-reviewed articles published from 2010 to 2017 that are written in the English language. Articles will also be evaluated for relevance to the topic, which includes 1) family presence during resuscitation risk and benefits, 2) nurse’s perceptions of family presence during resuscitation, and 3) the perceptions of the individual and their families. Sentinel articles from earlier studies will be analyzed for historical context to the topic. Excluded articles will focus on hospital policies affecting the practice of FPDR in healthcare facilities and resuscitation in settings that do not typically allow family members to be present (e.g. operative suites, specialty labs).

Each article was evaluated and individually critiqued for relevance to the topic and application to FPDR. Subsequently all the critiques were synthesized, and key data was extracted. Consistent and inconsistent findings were noted along with gaps in the literature. Recommendations for future research was identified. Implications for nursing practice, policy and education was included along with the limitations of this review.

RESULTS

Of the nineteen articles that were reviewed, ten articles were directly relevant to the outcomes of FPDR in the acute care setting. Supplementary articles are cited which were supportive to the evidence revealed in the nineteen articles (Appendix: Table 2). Table 1 summarizes the populations involved with FPDR that were found in the literature along with the authors and years of publication. Five citations suggest family presence during pediatric resuscitation was helpful for the child according to the individual's parents. Three citations focus on FPDR in the adult population; approximately one-half of randomly selected adult client's agreed family presence during CPR was important and the individual who would undergo resuscitation efforts wished to make the decision about who should be present. An additional five citations indicated an increase in post-traumatic stress related symptoms in the control group, the family members who were not offered the option to be present during resuscitation, and they had a higher agreement towards FPDR than the healthcare professionals. Nine citations suggest healthcare providers' perceptions affected the implementation of FPDR in the healthcare setting.

Each of these studies related to specific populations are examined in subsequent sections of this thesis. Results have shown FPDR is underutilized by healthcare professionals but is favorable by the individual's and their families'. The research examined throughout this thesis outlined the outcomes associated with implementation of FPDR. Anxiety and Post-Traumatic Stress Disorder (PTSD) related symptoms were decreased in the control groups, including depression.

Table 1: Population Outcomes of FPDR, Authors & Publication Date

Population Outcomes	Supportive Articles for	Total Articles
FPDR in Pediatrics	(Jones, Parker-Raley, Maxson, & Brown, 2011), (Smith, & Carew-Lyons, 2014), (O’Connell et al., 2017), (Dudley et al., 2009), (Mangurten et al., 2006)	5
FPDR in Adults	(Bradley et al., 2017), (Porter, Miller, Giannis, & Coombs, 2016), (Soleimanpour et al., 2017),	3
From the families’ perspective	(Jabre et al., 2013), (Lowry, 2012), (Soleimanpor et al., 2017), (Zali et al., 2017), (O’Connell et al., 2017)	5
Healthcare providers’ view	(Dwyer, & Friel, 2016), (Tudor et al., 2011), (Mian et al., 2007), (Porter, Miller, Giannis, & Coombs, 2016), (Powers, 2016), (Lowry, 2012), (Zali et al., 2017), (Jones, Parker-Raley, Maxson, & Brown, 2011), (Mangurten et al., 2006)	9

FPDR in Pediatrics

The cited studies in Table 1 describe the population outcomes of FPDR in the pediatric population and address the morality of FPDR in pediatric health care. Although research has shown FPDR provides psychological benefits for individuals and their families, the perceptions of the healthcare providers, family members, and the effectiveness of FPDR remain questionable in the pediatric health care setting. One article addressed whether FPDR prolonged pediatric trauma team resuscitation efforts or whether FPDR conflicted with care of the individual undergoing CPR.

Two out of the five articles found the parents of the pediatric individual had strong positive attitudes about being present with their child in the trauma bay. Smith & Carew-Lyons (2014), demonstrated the parents desire to be present during resuscitation and invasive procedures performed on their child and how they felt their presence was beneficial to the child.

However, those who were not with the individual expressed the need to be present during CPR on the pediatric individual. One out of the five studies evaluated whether family presence prolonged pediatric trauma team resuscitation efforts; Dudley et al (2009) found the amount of time was not significantly different between the control and the intervention group. Two of the five citations found the parents of the pediatric individual felt it was important to be at their child's bedside during emergency situations and believed it was helpful to their child. However, the parents did not think their presence made a difference in the quality of care. 97% of the providers said the experience is what they expected, 94% were comfortable with the family being present, and 89% reported their performance had not been affected with the parents present. Although, Jones, Parker-Raley, Maxson, & Brown (2011) addressed the healthcare provider's perceptions of legal concerns, and the potential risks involved with FPDR in the pediatric population.

FPDR in Adults

The cited studies in Table 1 show limited research on population outcomes of FPDR in the adult population. Although, FPDR has demonstrated positive psychologic benefits, health care providers remain reluctant in promoting family presence because of perceived negative effects. One out of three studies found staff to be uncertain and unsure when dealing with family members during resuscitation events. However, family members were observed to be isolated or relocated away from the resuscitation area. Overall, staff members found family presence confusing and believed it could cause a negative influence on nursing practice. One out of three studies analyzed the occurrences of anxiety, depression, and post-traumatic stress disorder. 90 days after the resuscitation event, family members of the individual resuscitated, had decreased

depression, anxiety, and PTSD related symptoms. The last of the three studies suggests there is no association between participant's knowledge of CPR and their perception of the importance of FPDR. 95.7% of the participants defined CPR correctly, and one half of the participants agreed FPDR was important (Bradley et al., 2017).

From the families' perspective

The cited studies in Table 1 focus on the risks, benefits, and perceptions of the family members in relation to FPDR. Jabre et al (2013) found family members who were unable to complete a 90-day telephone interview because of emotional distress found it was significantly greater in the control group that was not present during resuscitation than in the intervention group that was included during resuscitation efforts. The aim of this study is to determine whether offering a relative the choice of observing CPR might reduce PTSD related symptoms, anxiety, and depression. The frequency of PTSD related symptoms was found to be greater in the control group, and anxiety was also significantly higher in the control group. Although, depression did not differ significantly between the control and intervention groups, it was significantly lower among family members who were present than among those who were absent. One of the five studies analyzed the benefits and potential harm FPDR can have on family members of the individual undergoing resuscitation. The benefits provide family members opportunity to observe the effort put into resuscitation on their loved one, and to let the family know everything was done for the individual. The harm of FPDR was demonstrated through the number of family members present in the emergency department. The nurses described feeling personally uneasy by the amount of family members present during resuscitation efforts and felt there was a possibility the family would not understand what was

happening during resuscitation; therefore, fearing that legal issues could occur. Although nurses remain at the forefront for implementation of FPDR, there was a significant difference between nurses' and family members' attitudes towards the potential advantages of FPDR; and family members had significantly higher agreement than nurses for all items measuring FPDR advantages. However, there was no significant difference noted between nurses' and family members' opinions about prerequisites for implementation of FPDR (Zali et al., 2017).

Healthcare providers' perspective

The cited studies in Table 1 evaluated the perspectives of healthcare providers on FPDR, the influence of education on changing healthcare provider's attitudes, and their intent to provide families with the option to be present at the next cardiac arrest. Dwyer & Friel (2016), found the results not to be significant, 72% of the 29 health care providers thought having family present may result in psychological trauma; however, 86% believed the family knew all that was being done, and 76% believed FPDR facilitated acceptance of death. One of the nine studies evaluated the attitudes and behaviors of nurses and physicians toward FPDR. The results found nurses had shown more positive scores than did physicians. Although physicians lack positive attitudes toward the implementation of FPDR, one of the nine studies suggested healthcare providers were comfortable with family presence at resuscitation events, and their performance during CPR was not affected by their presence.

DISCUSSION

The studies examined for this thesis provide important data regarding the outcomes of FPDR on the various populations involved. This review of the literature serves as preliminary evidence for future research focusing on the positive outcomes associated with FPDR for the individual and their family members, and the experiences of the providers. The results repeatedly demonstrate family members' positive attitudes towards FPDR utilization, and facilitating family member's preparation of death, traumatic event, and potential loss. However, the healthcare providers' education, experiences, and attitudes are the main impact associated with FPDR's underutilization in the healthcare setting.

Offering family members, the opportunity to be present with an individual during resuscitation efforts and invasive procedures remains a controversial issue. However, Davidson's Theory of Facilitated Sensemaking found with incorporation of FPDR, family members can make sense of post-resuscitation outcomes and what their new role is based on the outcomes. One study suggested the use of a clinical care coordinator to facilitate understanding of the efforts involved in resuscitation. Two studies found the effectiveness of resuscitation was not affected by the presence of a family member and did not prolong resuscitation efforts. However, nine of the nineteen studies addressed healthcare provider's perceptions of FPDR. Most providers did not utilize the practice and isolated family members during resuscitation efforts and invasive procedures.

The limitations of the current study need to be considered. First, one of the nineteen studies addressed the implementation of a clinical coordinator as an implication for nursing. None of the studies permitted the use of a clinical coordinator to evaluate the advantages or

disadvantages in addition to utilization of FPDR. Second, the reaction of the family member's post-resuscitation less than 90 days was not addressed. It is unknown whether family members were removed, or how they reacted initially. Although, one study mentioned family presence did not affect care of the individual.

IMPLICATIONS FOR NURSING

Based on this integrative review, the next sections highlight implication for nursing practice, policy, research, education, and study limitations.

Practice

The results of this integrative review have several implications for nursing practice. Porter, Miler, Giannis, & Coombs (2017) highlighted the significance of the care coordinator role during resuscitation events. The implementation of the care coordinator would help facilitate the transfer of information between medical and nursing staff to family members, supports the family to remain at the bedside, and acts as a resource for family members during the event. The care coordinator role helps the health care team focus on clinical intervention of the individual while the coordinator focuses on the needs of the family members. FPDR policy would help aid more effective implementation and practice while ensuring expectations remained less ambiguous for staff and family alike.

Mureau-Haines et al (2017), conducted a literature review to address the lack of FPDR protocols, and training curricula. The objective was to develop a curriculum and to train the resuscitation team members whose role is to provide family support during resuscitation events. More than 70% of surveyed clinical staff expressed greater comfort with FPDR if a designated staff member was present to address the needs of family members. 59 social workers and 8 spiritual care providers had been trained as a Family Support Provider (FSP). Training members of the interdisciplinary team provided greater comfort in the room during a resuscitation event. However, FSP's are not expected to give clinical updates or explanations to family. This limits

the FSP's scope of practice to comfort families' during the resuscitation event and does not help them make sense of what is happening.

Policy

At the national level, specific policy changes are needed that focus on FPDR protocols, designated personnel to inform family members, and decreased anxiety, depression, and PTSD related symptoms. Finally, at the local level, hospital policies should consider the use of an advocate to help family members understand the resuscitation event or invasive procedure their loved one is undergoing.

Research

Current research primarily focuses on the healthcare providers' experiences, and attitudes towards the practice with minimal information addressing the outcomes related to the individual and their family members present during resuscitation and invasive procedures. Further nursing research is needed regarding the outcomes specifically related to the individual, and family members, to substantiate actual and potential results with FPDR in the acute care setting, and to utilize the practice into the healthcare system. Studies involving larger randomized samples with diverse populations in the acute care setting are needed in order to generalize the findings on FPDR outcomes; and to integrate an appropriate protocol for implementation of FPDR.

Education

Education implications for FPDR have a two-fold purpose which includes focusing on health professionals and the outcomes of the individuals. Health care provider curriculums should include education focused on the benefits associated with FPDR and its implementation in the health care setting. In respect to the individuals, nurses must conscientiously focus on

integration of family members in the individual's care during resuscitation efforts and invasive procedures. According to Davidson's Theory of Facilitated Sensemaking, the family members of the individual need to understand what has happened post resuscitation efforts and comprehend their new role relative to post-physiologic outcomes of the individual.

LIMITATIONS

Several limitations were noted in this integrative review of the literature. The initial search results revealed numerous potentially relevant articles (i.e., keywords included family presence during resuscitation, family presence, pediatrics, nurse perceptions, and perceptions). However, only 19 research articles met the inclusion criteria and were relevant to the purpose of the review focusing on the risks and benefits associated with implementation of FPDR. Of the 19 research articles reviewed, only four included a sample size larger than 200 subjects. The absence of research articles focusing on the outcomes of FPDR, small sample sizes, and absence of information on vulnerable subpopulations limit the generalizability of the findings. These limitations provide a wide range of research topic areas for nurses.

SUMMARY

The purpose of this integrative review of recent research literature was to recognize the risks and benefits associated with the implementation of FPDR. A secondary purpose was to identify the barriers that contribute to the decreased utilization of FPDR. The results of this review were found to favor the initiation of FPDR in the healthcare setting and found the benefits of utilization outweigh the risks. Finally, based on this review, implications for nurses and the health care team were provided as well as limitations to implementation of FPDR were highlighted.

Figure 1: Consort Diagram of Thesis Methodology

Flow Diagram of Study Selection Process

Key Search Terms = ‘family presence during resuscitation’, ‘family presence’, ‘pediatrics’, ‘nurse perceptions’, and ‘perceptions’.

Limiters = English language, peer-reviewed, publication date from 2006 to present

Potentially relevant citations identified after screening of databases
(CINAHL, ERIC, Ebsco Host, Medline, PsychINFO, PubMed)
(*n*=371)

Citations excluded due to not meeting the inclusion criteria
(*n*=85)

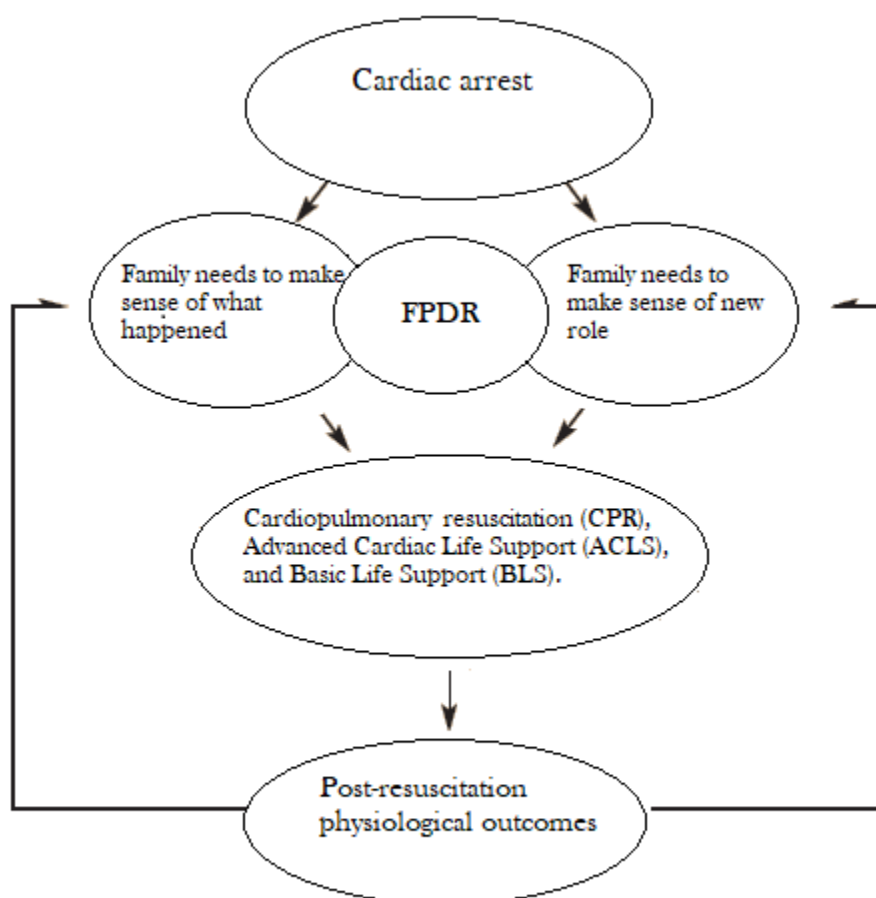
Studies retrieved for more detailed review
(*n*=35)

Studies excluded after a more detailed review due to not completely meeting inclusion criteria
(*n*=20)

Relevant studies included which met all the inclusion criteria
(*n*=10)

Additional studies reviewed and selected for use
(by hand searching credible reference citations)
Total *n* = 19 for review

Figure 2: Diagram of Facilitated Sensemaking with Implementation of FPDR



Adapted by Audra M. Corn from Judy. E Davidson RN, DNP, CNS.

Table 1: Table of Evidence

Author(s) Year Location	Study Design and Purpose	Sample Size	Intervention Protocol	Screening Measures	Outcome Measures	Key Findings and Limitations
(Dwyer & Friel, 2016) Australia	Quasi-experimental study To explore the influence of education on changing healthcare providers attitudes and intent to provide families with the option to be present at the next cardiac arrest.	n=200	Developed an evidenced-based, self-directed online learning package consisting of journal articles, web links and summaries of commonly cited facilitators and barriers to FPDR. This mode of delivery was chosen because previous studies on FPDR education sessions have noted few staff actually attended.	A purposive sample of 29 HCP from an acute care hospital participated; 18 of the original 29 HCP completed both the education package and the post-test questionnaire; mean age of participants was 39 years; 82.8% female, 82.8% registered nurses, 79.3% certified competent in	The survey consists of attitudinal questions divided into four sections: staff safety concerns, family support, staff decision making, and patient rights. Attitudinal rights used a five-point Likert type scale format ranging from 1= strongly disagree to 5 = strongly agree.	The results were not significantly significant ($p > 0.05$). Overcrowding, potential litigation, and family distraction the resuscitation team were identified as the main concerns. 72% of participants thought having family present may result in psychological trauma causing the family to ask too many questions or interfere with the resuscitation efforts. Conversely, participants believe that having family present meant that family; knew all that was being done

				<p>ALS, 55% met responders, and 62% with FPDR experience.</p>		<p>(86%), were together at the end (80%), could advocate for the patient (72%), and facilitated acceptance of death (76%).</p> <p>Limitations: non-randomized convenience sampling, single site with small sample size; findings could be biased as participants may have elected to participate because of strong personal beliefs on the topic (sample bias), and the difficulties recruiting participants may reflect a low level of support for FPDR within the data collection site. Also, given the small response from the medical HCP, the findings could be</p>
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						heavily influenced by nurses' scores.
Jabre et al. (2013) France	Prospective, cluster-randomized, controlled trial. The aim of this trial was to determine whether offering a relative the choice of observing cardiopulmonary resuscitation (CPR) might reduce the likelihood of PTSD related symptoms.	n=570 Intervention group (n=266) Control group (n=304)	Control group consisted of family members who were not given the option to be present during resuscitation efforts; the intervention group included family members who were given the option to be present during their loved one's resuscitation efforts.	For emergency medical service units assigned to the intervention, a medical team member systematically asked the family member whether they wished to be present during resuscitation. Location is France. Inclusion: Analysis was restricted to family members whose relatives were deceased by day 28.	Primary: The proportion of relatives with PTSD related symptoms on day 90 90 days after resuscitation, a trained psychologist enrolled relatives to answer a structured questionnaire by telephone; the Impact of Even Scale (IES) and Hospital Anxiety and Depression Scale (HADS) were completed; the	The proportion of family members who were unable to complete the 90-day telephone interview because of emotional distress was significantly greater in the control group than in the intervention group (p=0.007). The frequency of PTSD related symptoms was significantly greater in the control group than in the intervention group and was significantly higher among family members who did not witness CPR than among those who did. Additionally, the frequency of symptoms of anxiety was significantly higher in the control group than in the intervention

				<p>Exclusion: Communication barriers with the relative and cardiac-arrest cases in which resuscitation was not attempted.</p>	<p>IES includes 15 items which were scored on a scale from 0 to 5, so the total ranges from 0 (no PTSD related symptoms) to 75 (severe PTSD related symptoms). The HADS has two subscales; one evaluates anxiety and the other evaluates symptoms of depression. They range from 0 to 21; scores higher than 10 indicate moderate to severe symptoms of</p>	<p>group and was also significantly higher among family members who did not witness resuscitation than among those who did ($p < 0.001$ for both comparisons). The proportion of family members with symptoms of depression did not differ significantly between the control and intervention groups ($p = 0.13$), but was significantly lower among family members who were present than among those who were absent ($p = 0.009$).</p> <p>Limitations: The study was conducted in France. Although this fact may preclude generalizing the findings to other emergency medical</p>
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					<p>anxiety or depression.</p> <p>Secondary: the effect of family presence on medical efforts at resuscitation, the well-being of the health care team, and the occurrence of medicolegal claims.</p> <p>Visual-analog scale and nine-item questionnaire were used. After recruitment was completed all center investigators were asked to report medicolegal</p>	<p>systems, many studies evaluating this question in other settings have reported results in agreement with those of our study, supporting their generalizability. Second, not all patients died. Given that PTSD symptoms are related to post-traumatic grief, it might be expected that effect of being present during CPR would differ according to patient outcomes. However, we conducted a sensitivity analysis that excluded 20 survivors at day 28. Third, we included in this study relatives with various relationships to the patient. Lastly, our trial took place in patients' homes and did not evaluate in-hospital cardiac arrests. Trials in</p>
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					claims, complaints, and words of thanks.	the hospital setting, such as the emergency department or intensive care unit are needed to confirm our results, although some studies of pediatric trauma resuscitation show that family presence is not associated with negative outcomes.
Tudor et al. (2011) United States	Cross-sectional survey design To explore nurses' experience with resuscitation, perceptions of the benefits and risks of having a patient's family member(s) present, and self-confidence in having family presence at their workplace.	n=375	Data was collected anonymously via 2 methods: survey packets placed on nursing units in congregate areas frequented by nurses, such as break rooms, and an online survey. The hard-copy and online surveys were available for 14 days and took about 10 to 15	Recruited by using a scripted e-mail, verbal messages, and flyers placed in nonpatient areas. A follow-up e-mail was sent 1 week after the first e-mail message. Inclusion: 18 years or older and employed in the hospital	The instrument used was a 63-item survey consisting of demographic questions, opinion questions, and 2 scales previously validated by Twibell et al. The Family Presence Risk-Benefit Scale is a 22-item scale used to	More than half (54.5%) had been involved in more than 10 resuscitation events, but only 38.4% had ever invited a patient's family member to be present during resuscitation. 25% indicated they would want a member of their family present during their own resuscitation, and 16.2% had been present when a member of their own family was being resuscitated. The

			minutes to complete.	as a registered nurse.	measure nurses' perceptions of the risks and benefits of family presence to the patients' family, the patient, and members of the resuscitation team. Response options range from strongly disagree (1) to strongly agree (5). The second instrument is the Family Presence Self-Confidence Scale which is a 17-item scale used to measure nurses' self-confidence	mean score on the Family Presence Self-Confidence Scale (FPS-CS) was 3.6. Participants indicated that they were quite or very confident for 15 of the 17 items on the FPS-CS. The 2 items in which participants were less confident addressed enlisting physicians' support for FPDR and encouraging patients' family members to talk to the patient during resuscitation. The mean score on the Family Presence Benefits-Risk Scale was 2.9. Of the 22 items on the FPR-BS Scale (FPR-BS) scale, participants were neutral on 15. Participants neither agreed nor disagreed with items about the disruption of having
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					with having patients' family members present during resuscitation.	<p>FPDR, the benefits to the patient, the grieving process, and satisfaction ratings by patients and patients' family members as a result of FPDR.</p> <p>Limitations: The findings cannot be generalized beyond the respondents to the survey; physicians and respiratory therapists were not included in the survey. The survey could be completed on a hard copy or online; therefore, a participant could have completed the survey more than once.</p>
Bradley et al. (2017)	Cross-sectional design; qualitative study	n=117	Interview via survey to obtain information on	Potential study participants were randomly	The survey contained 3 statements:	95.7% defined CPR correctly. Approximately one-half

United States	To explore perceptions of patients on general medical units and to find factors independently associated with family presence during cardiopulmonary resuscitation.	Random sample	demographics, knowledge of cardiopulmonary resuscitation, sources of information on resuscitation, and preferences for family presence.	<p>selected from a list of patients with full code status (n=910).</p> <p>Inclusion: Having the ability to read and speak English.</p> <p>Exclusion: If they were undergoing treatment for cancer or related complications, had impaired decision-making capacity, or had received narcotics or sedatives within the previous 2 hours.</p>	<p>should you need CPR, it is important for you to (1) have a family member preset, (2) be the one to decide if this person should be present, and (3) give verbal or written permission ahead of time to have a family member present. Lastly, participants were asked to explain why family presence during CPR was or was not important to them. Responses were</p>	<p>of the participants agreed or strongly agreed that family presence during CPR was important (52.1%), that they wished to make the decision about who should be present (50.4%), and that giving verbal or written consent ahead of time to have a family member present was important (47.0%). Most participants in the younger age group (72.2%) agreed with the importance of family presence during CPR, compared with middle-aged (47.3%) and older (34.6%) participants. We found no association between the CPR knowledge of participants and their perception of the</p>
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					documented verbatim and were repeated to participant to verify accuracy.	importance of family presence during CPR. Limitations: Generalizability of our findings to other populations of patients is limited because the sample was drawn solely from medical units and did not include patients who were unable to speak and read English.
Mian et al. (2007) United States	A 2-group pretest and posttest design were used. The purpose of this study was to design and implement a family presence program in the emergency departments and to evaluate attitudes and	Percentage of respondents: Nurses (n=86) Physicians (n=35)	Implementatio-n of a family presence program in the emergency department at a major academic teaching hospital. The program included education, role-playing, and ongoing provision of support and feedback to staff	Inclusion: All nurses and physicians currently working in the emergency department who agreed to complete the surveys in January 2002 and in May 2003.	A survey was created to evaluate nurses' and physicians' values, attitudes, and behaviors before and after implementation of the program.	For both the pretest and posttest, nurses showed more positive scores in each domain than did physicians. Limitations: One limitation of the study was that the anonymous responses did not allow us to evaluate individual change but only group change. A difference in the educational approach also may have

	behaviors of nurses and physicians toward family presence during resuscitation before and after implementation of the program.		by the investigators.			contributed to the differences observed between the groups. Because physicians have limited formal teaching time, their education was incorporated into existing staff meetings. Nurses used a variety of teaching methods and had more flexibility with times and scheduling to maximize attendance at the educational sessions. Another limitation was the low response rate to the follow-up survey among physicians.
Porter, Miller, Giannis, & Coombs (2016) Australia	Limited disclosure approach The aim of this study was to observe emergency personnel during	Metro (n=9) Rural (n=8)	One rural and one metropolitan emergency department in the state of Victoria, Australia were observed, and data was collected	Inclusion: Adult presentation, full resuscitation event, with more than three team members,	Data from the written observation forms were transcribed to electronic notes and analyzed by the authors,	Staff remained uncertain and unsure about when dealing with family members during the resuscitation event. Regardless of thorough history taking from the relatives, staff

	<p>resuscitation events to ascertain the extent to which family presence during resuscitation is implemented.</p>		<p>on FPDR events. Emergency trained nurses, senior medical officers, general nurses, and doctors were included in the study. The participants were not told that the data would be recorded around interactions with family members of team discussions regarding family involvement in the resuscitation, following ethical approval involving limited disclosure of the aims of the study.</p>	<p>and event lasting longer than 5 minutes. There were not sufficient paediatric resuscitation events to warrant their inclusion into the final data set hence only adult resuscitation cases were included.</p>	<p>emergency care academics. The times the family were present, frequencies, resuscitation team members, roles and responsibilities for each resuscitation event were reviewed for clarity. Furthermore, the qualitative data were coded into meaningful chunks.</p>	<p>still observed to isolate family members or relocate them away from the resuscitation area. Staff were unsure when family members should remain in the resuscitation area, and who should be communicating to the family. The staff found family presence confusing and that it possibly caused a negative influence to their nursing practice.</p> <p>Limitations: The number of resuscitation events at each site was restricted by the approved time period and would need to be extended in order to make generalizations about emergency practice throughout Australia. There was limited amount of</p>
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						<p>paediatric resuscitation events observed and were subsequently excluded from the final data set, although the intent of the study was to compare staff practice in departments that had both adult and paediatric presentations. No data were collected about ethnicity, religion or cultural beliefs as the participants consisted of the health professionals not the patient or their relatives, therefore no findings can be presented related to these items.</p>
<p>Powers (2016) United States</p>	<p>Descriptive and qualitative data</p> <p>The aims of the study were to: 1) identify relationships between perception, self-</p>	<p>Convenience sample; n=395</p>	<p>Study advertisements were posted of AACN's Critical Care eNewline and social media sites (Facebook and Twitter) once</p>	<p>Inclusion: RN licensure and employment in an ICU per self-report.</p>	<p>The 22-item Family Presence Risk-Benefit Scale and 17-item Family Presence Self-Confidence</p>	<p>46% indicated their facility does not have a policy on FPDR and 37% were unsure. 33% received FPDR education, yet 93% had experienced FPDR, and 61% had received</p>

	<p>confidence, and invitation of FPDR and ICU nurses' demographic and professional factors, 2) examine ICU nurses' needs and preferences for FPDR education, and 3) describe and explore the barriers to FPDR perceived by ICU nurses.</p>		<p>per week for a total of 4 weeks in 2016. Study advertisements included a link to the online Qualtrics study site. After potential participants clicked on the link and consented to participate, surveys were administered, requiring approximately 20 minutes to complete.</p>		<p>Scale were administered to address aim 1. To address study aim 2, two quantitative items were administered to collect information on participants' desire for receiving FPDR education and preferred learning method, followed by a qualitative item asking participants to type in their thoughts about education and training on FPDR. To</p>	<p>family requests for FPDR. In the past year, 44% did not invite FPDR and 40% had only invited it 1 to 5 times. Quantitative results showed participants' decision to invite FPDR is influenced by availability of a dedicated person to accompany the family. Of 380 participants, 74% indicated lack of a family support person can be a barrier to invited FPDR.</p> <p>Limitations: The method of recruitment resulted in a sample comprised largely of nurses who are members of the AACN (80%) and the AACN has repeatedly issued practice alerts in support of FPDR to its</p>
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					address study aim 3, three quantitative items were administered to collect information on FPDR barriers.	members. Findings may not represent views of ICU nurses who are not AACN members. Other limitations include the potential for selection bias and response bias in this self-report study. Lastly, online data collection prohibited asking follow-up questions to gain deeper understanding about nurse participants' qualitative comments.
Lowry (2012) United States	Descriptive qualitative study The study objectives were to describe the benefit and harm of being present during resuscitation to family members, using perceptions of	n=14	14 emergency nurses described their experience with family presence in face-to-face interviews using an investigator-developed, open-ended tool. Transcribed interviews were evaluated using	Recruited by 76 registered nurses in the emergency department using letters, posters, and direct contact by the researcher.	The outcome measure was the benefit and harm of family presence.	The benefits of family presence are: giving the opportunity for a family member to see how much effort went in to trying to save their loved one, and the ability to see the effort let the family know "everything was done." The harm of family presence as demonstrated through

	<p>nurses who work in an emergency department with a well-established family presence protocol; and define family presence using perceptions of nurse participants.</p>		<p>conceptual content analysis.</p>	<p>Inclusion: had to be a registered nurse</p>	<p>one instance. The nurse described an experience did not go as well because of the number of family members who came to the emergency room. The nurses described feeling personally uneasy because of the possibility of the family member not understanding what was happening during the resuscitation and legal damage could be done.</p> <p>Limitations: Experience with family presence could only be estimated by the participating nurses. Nothing is known about how well the nurses in this study represented the experiences of staff who chose not to participate in this study. The study could not control for or</p>
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						evaluate how well the written protocol was followed. The nurses may not have been able to identify when a family member was allowed family presence if someone else made this determination away from the resuscitation room.
Soleimanpour et al. (2017) Iran	Quasi-experimental study The purpose of this study was to analyze the occurrences of anxiety, depression, and post-traumatic stress disorder in the intervention group (the group present during resuscitation), and the control group (the group	n= 59 (control group); n=74 (intervention group)	90 days after CPR, the participants of both groups were interviewed by one research group member through a phone call with a questionnaire.	Inclusion: cardiac arrest cases and 18 years of age or older. Exclusion: Anyone who had a psychiatric disorder or were being treated with psychiatric drugs. Not being cooperative or not having	The main outcome measures were depression, anxiety, and post-traumatic stress symptoms.	IES questionnaire, dealing with study of PTSD among relatives, showed that in control PTSD was meaningfully more than intervention ($p<0.00010$). The HADS questionnaire (allocated to depression) revealed that after 90 days of CPR, depression in the control group was meaningfully higher than intervention ($p<0001$) the same results were found with anxiety ($p<0.0001$).

	not present during resuscitation).			contact with relatives or any cardiac arrest, and patients without undergoing CPR.		
Zali et al. (2017)	<p>Descriptive study</p> <p>The purpose of the study was to determine Iranian nurses' and family members' attitudes towards FPDR.</p>	n=78 (family members); n=111 (nurses)	Data was collected via a random sample of 178 nurses and 136 family members in four hospitals located in Iran.	<p>Inclusion criteria for nurses: an academic degree in nursing and the experience of caring for a patient who underwent CPR.</p> <p>Inclusion for family members: family members of patients who had CPR were invited to participate and were required to be 18 years of age or older.</p>	The outcome measures are separated into different sections: potential advantages of FPDR, potential disadvantages of FPDR, and opinions about additional prerequisites for the implementation of FPDR.	There was a significant difference between nurses' and family members' attitudes towards the potential advantages of FPDR ($P < 0.05$), and family members had significantly higher agreement than nurses for all items measuring FPDR advantages. Attitudes towards the potential disadvantages of FPDR also significantly differed between nurses and the family members ($P < 0.05$). There was no significant difference noted between nurses' and family members' opinions about prerequisites for the

						<p>implementation of FPDR ($P > 0.05$).</p> <p>Limitations: A major limitation is that patients' attitudes towards FPDR were not evaluated and this requires further study. In addition, the use of a self-report questionnaire which is subject to response bias and limited number of the deceased patient family members (7%) participation was another limitation of this study.</p>
<p>Jones, Parker-Raley, Maxson, & Brown (2011) United States</p>	<p>Mixed-method design To examine the conflicting perceptions that health care professionals</p>	<p>n=137 health care professionals from phase one; n=12 phase 1 respondents</p>	<p>Data collection via survey. The first section included a scenario and a question on whether the provider agreed</p>	<p>Inclusion: registered nurses, physicians, and medical students at Dell Children's Medical Center</p>	<p>The main outcome measure was the sympathy for families, sympathy for the trauma teams, risk</p>	<p>Both groups feel sympathy for families and trauma team members, are concerned about potential legal problems and risks involved with family presence and are</p>

	<p>hold regarding family presence during pediatric resuscitation.</p>	<p>to be interviewed</p>	<p>or disagreed with the physician's decision to allow the patient's family to be present during the resuscitation attempt. The second section included 22-items that were used to assess participants' viewpoints and estimations of their opponents' views, regarding sympathy for families and health care providers and concerns and risks linked with the family presence debate.</p>	<p>of Central Texas in Austin.</p>	<p>involved during family presence, and concern for health care providers.</p>	<p>concerned for the health care providers who conduct pediatric resuscitations. However, participants on both sides rationalize the differences in attitudes between themselves and their opponents by assuming that their opponents are less sympathetic and concerned about patients' families, trauma teams, and health care providers are overly preoccupied with legal concerns and potential risk involved with family presence during pediatric resuscitations.</p> <p>Limitations: The sample was largely homogenous, representing mostly white professionals who all worked in the same</p>
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						hospitals in Austin, Texas. Secondly, only a few interviews were conducted after the family presence survey was collected. Lastly, demographic differences between groups such as age, religious, and political differences were not thoroughly explored, and the study participant's' prior experience with pediatric resuscitation and family presence was unknown.
Mangurten et al. (2006) United States	Descriptive study The purpose of this study was to determine the effectiveness of a family presence protocol in	n=64 family presence events; 28 were resuscitation interventions and 36 were invasive procedures	The Family Presence Protocol was defined as the attendance of a family member(s) in a location that afforded visual or physical contact with the patient during a	Inclusion: parents who chose to be at the bedside while their child was undergoing resuscitation intervention, or an invasive	The 21-item Pediatric Family Presence Event Data Collection Tool was completed by the family facilitator to	All parents interviewed said that it was important for them to be at their child's bedside during the emergency procedure and believed that their presence was helpful to their child. Nearly all (95%) reported that being there

	<p>facilitating uninterrupted care and describe patients' and providers' experiences.</p>		<p>resuscitation intervention or invasive procedure. This protocol/policy was implemented for this study using the previous published policy based on the Emergency Nursing Association's (ENA) recommendations.</p>	<p>procedure were eligible to participate in the study. Parents had to be 18 years or older and be able to understand and speak English (because of the need to explain family presence events and interview the family by phone). On the other hand, registered nurses, physicians, and residents involved in the family presence event were invited to participate.</p>	<p>determine whether the family presence protocol facilitated uninterrupted patient care. To determine attitudes and experiences about the family presence event, a 20-item Pediatric Family Presence survey was used to interview parents and a 32-item survey for healthcare providers.</p>	<p>helped them personally and assisted them in understanding their child's condition. Most parents believed they had a right to be there (86%) but did not think their presence made a difference in how providers cared for their child (82%). The majority of the 92 providers said the family presence experience was what they expected (97%), they were comfortable with the family being present (94%) and reported that their performance during the procedure had not been affected (89%).</p> <p>Limitations: Only 34% of the families were interviewed. The generalizability of the families' responses are</p>
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				Exclusion: If the family determined that they were emotionally unstable, combative, involved in suspected child abuse, r exhibited an altered mental status including alcohol or drug impairment.		limited because only those parents assessed as suitable candidates who accepted the family presence option were included; those who declined or were deemed unsuitable were not studied. Also, the parents were interviewed 3 months later, their recollections may have been prone to recall error. Exclusion of non-English speaking families limits generalizability as well.
Smith & Carew-Lyons (2014) United States & Australia	The PRISMA model guided this systematic literature search of CINAHL, MEDLINE, Ovid, and PubMed for articles published	6 articles met criteria and were included in this review	Data collection via CINAHL, MEDLINE, Ovid, and PubMed for articles published between 1995 and 2012.	Inclusion: full-text articles written in English with search terms found in the title or as keywords. Exclusion: literature	95 abstracts were evaluated for relevance. Six articles met inclusion criteria and were included in this review.	Parents in all studies expressed their desire to be present during invasive procedures and/or resuscitation of their child. In 5 of the 6 studies, researchers noted that parents felt that their presence was helpful to their child. Parents also commented that being present was

	between 1995 and 2012.			reviews, articles unrelated to the pediatric critical care setting, mixed adult/pediatric studies, case reviews, articles with a focus on provider attitudes and perspectives, opinion pieces, articles not focused on resuscitation or invasive procedures, and resource manuals.		beneficial for them, specifically noting that physical contact with their child was valuable. Those who were not present wished that they have been present for cardiopulmonary resuscitation. Limitations: All studies but one was limited by a small sample size. Also, all the studies are single institution experiences in either the United States or Australia, making it difficult to generalize the results. Lastly, most studies were retrospective, and involvement of participants were voluntary, which may introduce selection bias.
O'Connell et al. (2017) United States	Observational, mixed-methods study To measure attitudes,	n= 126; 99 present, 27 not present.	Data collection via telephone interviews and focus group meetings	Structured telephone interviews were conducted by 2 trained	Family Present Survey: 36-item survey with 3 sections including;	Overall, for families present, the survey indicated the parents had strong positive attitudes about being in

	<p>behaviors, and experiences of family members of pediatric patients during the resuscitation phase of trauma care, including family members who were not.</p>		<p>conducted 3-6 months after the event for families who were present (family present group) and those who were not present (family not present group) during their child's trauma evaluation.</p>	<p>interviewers using the Family Present and Family Not Present surveys. All telephone interviews were 30-45 minutes long, audio recorded, transcribed, and validated for accuracy. Family members were also invited to have an in-person focus group.</p> <p>Inclusion: all children 188 years old or younger who met trauma team activation criteria based on each trauma</p>	<p>attitudes about family presence, determined using the Parental Family Present Attitude Scale; perceptions of behaviors and interactions while in the room; and experiences while at their child's trauma evaluation.</p> <p>Family Not Present Survey: 17-item, investigator-developed survey measure attitudes, using the Parental Family Not Present</p>	<p>the trauma bay with their child during the initial trauma care. On the other hand, the 27 family members who were not present felt although they were not there during the initial trauma evaluation, they had a positive attitude about wanting to be with their child during the event.</p> <p>Limitations: The study was not a randomized controlled trial because the researchers believed it was not ethically feasible due to the widely accepted benefits of family presence. In addition, the three study sites had existing family presence programs in place unrelated to the study; the findings may have been more positive</p>
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				center's guidelines were included. In addition, families who did not participate in family presence were also included in the study.	Attitude Scale, and experiences of not being present for the event.	because of prior education and acceptance by emergency department and trauma teams; results could be different at organizations in which a culture of family-centered care is less established.
Dudley et al. (2009) United States	Single-center, prospective trial To determine whether family presence prolonged pediatric trauma team resuscitations as measure by time from emergency department arrival to computed tomographic	n= 705; 283 with family presence on even days, and 422 without family presence on odd days.	In each trauma resuscitation, the trauma nurse documented patient information on a flow sheet. Timing of arrival and trauma interventions was recorded, including times of portable radiographs, laboratory tests,	Data was collected prospectively on all children requiring trauma team activation between March 1, 2004 and June 18, 2006, and included as part of the trauma registry. Trauma 1 and 2 patients were	The main outcome measure was the time from arrival of the patient in the trauma room to leaving the trauma room for CT scan (CT time). A secondary outcome measure, resuscitation	CT time had a median of 21 minutes for patients with family presence and without family presence. The median resuscitation time was 15 minutes for patients with family presence in the protocol and 15 minutes without family presence. The time family entered the trauma room was documented in only 39% of resuscitations

	<p>scan, and to resuscitation completion.</p>		<p>intravenous line placement, and procedures performed, and time to disposition and end of the resuscitation. The flow sheet had space for documentation of family presence and time.</p>	<p>included in this study. Trauma 3 patients are not stable and do not meet the inclusion criteria and were not included in the study</p>	<p>time, was defined as time to completion of all laboratory tests, emergency procedures, portable radiographs, and secondary survey.</p>	<p>with family presence. However, when it was documented, it occurred shortly after patient arrival, with a mean time of 2 minutes.</p> <p>Limitations: The study was not randomized or blinded, introducing bias in patient enrollment. Prestudy education and agreement by all services involved attempted to eliminate caregiver bias. Family presence is unlikely for the sickest patients because of space and weight constraints of helicopter transport. The study also relied on documentation of time which can be unreliable. In addition, family entry closer to the completion of resuscitation will potentially have less</p>
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						effect on the resuscitation than those arriving earlier.
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