Clinical Practice Guideline: Family Presence During Invasive Procedures and Resuscitation

Does family presence have a positive or negative influence on the patient, family, and staff during invasive procedures and resuscitation?

Developed by the 2009 ENA Emergency Nursing Resources Development Committee

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Background/Significance

The practice of allowing family members to be present at the resuscitation or invasive procedure of their relative is one that been discussed over the past few decades. With the rise of family-centered care, family input into healthcare decisions has increased and strict visitation policies have relaxed, even including family at the bedside during invasive procedures and resuscitation. This concept was first presented in the early 1980's when Foote Hospital in Michigan began a program to facilitate the practice of family member presence during resuscitation as a response to demands by families (Doyle, 1987). Hanson and Strawser (1992) presented data from that program as the seminal research on this topic. Since then the research has centered on several different aspects of this issue. In both the initial CPG and the update, support for family presence continues in the healthcare worker population as well as in the family population in the United States. New research has not yielded any findings that would change the practice recommendations for allowing family presence during resuscitation.

Research has been conducted to examine the perspectives of the patient - both children and adults - (Piira, Sugiura, Champion, Donnelly & Cole, 2005; Mortelmans et al., 2009) and patients' family members, including opinions regarding family presence and facilitation or hindrance of grief based on witnessing the resuscitation of a relative (Dudley et al., 2009; Mortelmans et al., 2009; Piira et al., 2005; Tinsley et al al., 2008). Research has also been conducted to examine the perspectives of the healthcare team, including opinions regarding family presence and the concept of family presence being of assistance to or causing interference with the resuscitation or procedure (Basol, Ohman, Simones, & Skillings, 2009; Demir, 2008; Dudley et al., 2009; ENA, 2007; Fallis, McClement & Pereria, 2008; Fernandez et al., 2009; Kuzin et al., 2007; Madden & Condon, 2007; Nigrovic, McQueen, & Neuman, 2007; Piira et al., 2005, Pruitt et al., 2008; Walker, 2008). There are studies that have defined family presence as parental presence for a minor child for invasive procedures (Kuzin, et al., 2007; Nigrovic, McQueen, & Neuman, 2007; Piira, Sugiura, Champion, Donnelly, & Cole, 2005) and resuscitation (Dudley et al., 2009; McGahey-Oakland et al., 2007; Tinsley et al al., 2008) or family members being present during resuscitation of adult relatives (McClement, Fallis, & Pereira, 2009). In updated literature, more attention has been paid to attitudes toward the practice of allowing family presence during resuscitation in other countries (Gunes and Zaybek, 2009; Al-Mutair, Plummer, Copnell , 2012; Koberich, S., Kaltwasser, A., Rothaug, O., Albarran, J. 2010; and Leung and Chow, 2012). This literature uncovers culturally-bound attitudes that may have implications in multi-ethnic staffing situations.

Methodology

This CPG was created based on a thorough review and critical analysis of the literature following ENA's Guidelines for the Development of Clinical Practice Guidelines. Via a thorough literature search, all articles relevant to the topic were identified. The following databases were searched: PubMed, eTBLAST, Cochrane - British Medical Journal, Agency for Healthcare Research and Quality (AHRQ; www.ahrq.gov), and the National Guideline Clearinghouse (www.guidelines.gov). Search terms included the keys words family presence or parental presence, and invasive procedures, or resuscitation and emergency. Search limitations included articles published in the English language from 2005 to2012. Systematic, critical and comprehensive reviews included represent earlier works. Classic and seminal research on the issue, as well as non-research articles were also reviewed for historical perspective. In addition, the reference lists of articles found via literature search were scanned for pertinent references.

Articles that met the following criteria were chosen to formulate the CPG: research studies, meta-analyses, systematic reviews, and existing guidelines relevant to the topic. Individuals studies that have

been reviewed by any systematic reviews/meta-analyses were not included in the evidence table. Rather, the findings of the systematic reviews/meta-analyses were presented in the evidence table. For example, in 2007, the Emergency Nurses Association published the third edition of *Presenting the Option for Family Presence.* The review of the literature included 117 research studies. Studies in this publication were not individually referenced nor included in the Evidence Table for this CPG. Evidence identified in *Presenting the Option for Family Presence (*3rd ed.) is cited as (ENA, 2007). Other types of articles were also reviewed and provided as additional information. The CPG authors used standardized worksheets, including Evidence-Appraisal Table Template, Critique Worksheet and AGREE Work Sheet, to prepare tables of evidence ranking each article in terms of the level of evidence, quality of evidence, and relevance and applicability to practice. Clinical findings and levels of recommendations regarding patient management were then made by the Clinical Guidelines Committee according to the ENA's classification of levels of recommendation for practice, which include: Level A High, Level B. Moderate, Level C. Weak or Not recommended for practice (See Table 1).

Table 1. Levels of Recommendation for Practice

Level A recommendations: High

- Reflects a high degree of clinical certainty
- Based on availability of high quality level I, II and/or III evidence available using Melnyk & Fineout-Overholt grading system (Melnyk & Fineout-Overholt, 2005)
- Based on consistent and good quality evidence; has relevance and applicability to emergency nursing practice
- Is beneficial

Level B recommendations: Moderate

- Reflects moderate clinical certainty
- Based on availability of Level III and/or Level IV and V evidence using Melnyk & Fineout-Overholt grading system (Melnyk & Fineout-Overholt, 2005)
- There are some minor or inconsistencies in quality evidence; has relevance and applicability to emergency nursing practice
- Is likely to be beneficial

Level C recommendations: Weak

- Level V, VI and/or VII evidence available using Melnyk & Fineout-Overholt grading system (Melnyk & Fineout-Overholt, 2005) - Based on consensus, usual practice, evidence, case series for studies of treatment or screening, anecdotal evidence and/or opinion
- There is limited or low quality patient-oriented evidence; has relevance and applicability to emergency nursing practice
- Has limited or unknown effectiveness

Not Recommended for Practice

- No objective evidence or only anecdotal evidence available; or the supportive evidence is from poorly controlled or uncontrolled studies
- Other indications for not recommending evidence for practice may include:
    - Conflicting evidence
    - Harmfulness has been demonstrated
    - Cost or burden necessary for intervention exceeds anticipated benefit
    - Does not have relevance or applicability to emergency nursing practice
- There are certain circumstances in which the recommendations stemming from a body of evidence should not be rated as highly as the individual studies on which they are based. For example:
    - Heterogeneity of results
    - Uncertainty about effect magnitude and consequences,
    - Strength of prior beliefs
    - Publication bias

Evidence Table and Other Resources

The articles reviewed to formulate the CPG are described in the Evidence Table. Other articles relevant to family presence were reviewed to serve as additional resources (Other Resources Table).

Summary of Literature Review

Patient Perspective

There is little evidence to indicate any effect on the patient either experiencing family presence or not. Robinson (as cited in Dingeman, Mitchell, Meyer and Curley, 2007) interviewed three adult survivors of resuscitation and although excluded from the study of family perspectives, all three indicated they were content to have family present. Dudley et al. (2009) reported that parents believed their presence to be helpful to their children during trauma resuscitation. The purpose of their study was to investigate the effect on resuscitation and testing times, however, they interviewed families for qualitative input. Tinsley et al. (2008) also reported a majority of family members believed their presence during resuscitation was comforting to their child. Mortelmans et al. (2009) interviewed adult inpatients with life-threatening illnesses, asking if they would prefer to have their family members present should their condition deteriorate and they would require resuscitation. A majority indicated that would be their preference despite believing it may be traumatic for them. In a systematic review of literature on parental presence for children undergoing invasive procedures, Piira et al. (2005) reported specifically analyzing pediatric responses. They found mixed results for child behavioral and emotional responses to having parents present. Studies with weaker evidence were more likely to find a significant positive response.

Family Perspective

An increased number of research studies were conducted from the family's perspective. A majority of family members expressed a desire to be present, stating that it is their right to be present and would recommend it to other families (Dingeman et al., 2007; Dudley et al., 2009; McGahey et al., 2007; Mortelmans et al., 2009; Piira et al., 2005; Tinsley et al., 2008). McGahey et al. (2007) identified that all parents surveyed felt the option to be present should be given. Piira et al. (2005) reported that 7 of 17 reviewed studies demonstrated a decreased level of distress and an increased level of satisfaction in families present, while the other 10 studies demonstrated no significant difference between those present and those not. None of the studies reviewed demonstrated any level of increased distress or decreased satisfaction related to being present. Another common theme among family members who had been present during resuscitation is that they believed everything that could have been done for their family member had been done (ENA, 2007; McGahey et al., 2007; Tinsley et al., 2008). Tinsley et al. (2008) also identified a majority of parents (67%) felt it helped them cope with the death of their child, while 43% stated that being present was the thing that helped them the most during the resuscitation. In the recent literature, only one family-focused study was published. Hung and Pang (2011) found that family members of survivors would opt to be present during resuscitation; however, in this study, none actually were present.

Health Care Professional Perspective

Results of research that focused on the opinions and perspective of health care professionals indicated support for the practice of family presence during resuscitation and invasive procedures (Basol et al., 2009; Dingeman et al., 2007; ENA, 2007; Fallis, & Pereira, 2009; Kuzin et al., 2007; Madden & Condon, 2007; McClement et al., 2009; O'Connell et al., 2007). Demir (2008) identified that 82% of physicians and nurses in emergency departments and intensive care units in Turkey felt it was inappropriate for families to witness resuscitation. The author suggested that cultural differences may have accounted for the much lower level of approval of the practice in this study compared to others. The author also highlighted that 86% of the respondents had read no research or other articles regarding family presence and 97% had no knowledge of international guidelines published on the topic.

Common themes emerged from many of the studies regarding the opinions of health professionals. Those approving of family presence thought it helped them to see the effort of the resuscitation team; that everything that could have been done, had been done, which may lower the risk of litigation surrounding the resuscitation or procedure (Basol et al., 2009; Crtichell & Marik, 2007; Dingeman et al., 2007; McClement et al., 2009; Pruitt et al., 2008; Walker, 2008). Another theme was that health care professionals felt family presence was a positive experience; that it humanized the patient and supported patient dignity (Basol et al., 2009; Crtichell & Marik, 2007; Demir, 2008; McClement et al., 2009; Pruitt et al., 2008). Many studies demonstrated that health care professionals felt having family members present enhanced communication and facilitated education (Basol et al., 2009; Dingeman et al., 2007; Kuzin et al., 2007; McClement et al., 2009; Pruitt et al., 2008; Walker, 2008). Another theme from health care professionals was that it facilitated the grief process in the case of unsuccessful resuscitation. It gave family members the opportunity to say good-bye and promoted families' acceptance of the death of their loved one (Demir, 2008; Dingeman et al., 2007; McClement et al., 2009; Walker, 2008).

Despite the majority of health care professionals having expressed support for the concept of family member presence during resuscitation and procedures there were several themes that emerged demonstrating reasons for reservation regarding the practice. These themes included the possibility of families interfering with the process and disrupting care (Basol et al., 2009; Demir, 2008; Dingeman et al., 2007; Fernandez et al., 2009; Madden & Condon, 2007; McClement et al., 2009; Walker, 2008), increased performance anxiety and stress on the part of clinicians, the interference with the process of teaching (Basol et al., 2009; Demir, 2008; Dingeman et al., 2007; Fernandez et al., 2009; Madden & Condon, 2007; McClement et al., 2009; Walker, 2008), the possibility that witnessing the event may be too traumatic for families (Basol et al., 2009; Demir, 2008; Dingeman et al., 2007; Fernandez et al., 2009; McClement et al., 2009; Pruitt et al., 2008; Walker, 2008), and misinterpretation of procedure and increased risk of litigation related to families witnessing resuscitation and procedures(Demir, 2008; Dingeman et al., 2007; Fernandez et al., 2009; Madden & Condon, 2007; McClement et al., 2009; Walker, 2008).

Cultural Considerations

Several studies were done exploring the attitudes of nurses in Turkey (Gunes and Zaybek, 2009), Saudi Arabia (Al-Mutair, Plummer, Copnell , 2012), Germany (Koberich, S., Kaltwasser, A., Rothaug, O., Albarran, J. (2010), and Hong Kong (Leung and Chow, 2012) with regards to family presence during resuscitation. Studies reported guarded or negative attitudes of health care workers toward family presence, citing concerns around stress to staff and family members. In one study (Leung and Chow,

2012), family members were in favor of being present at resuscitation more so than healthcare workers.

Interference with Care

One final group of studies observed the care provided during resuscitations and procedures to determine any demonstrable effect on performance by health care professionals. O'Connell et al. (2007) researched pediatric trauma activations and identified no significant difference in time to log-rolling, radiographs, intravenous access, central line placement, intubation or chest tube insertion based on family members having been present in the trauma room. The authors reported no interference of care by any family member in the 196 cases included in the study that had family members present. Dudley et al. (2009) also examined pediatric trauma resuscitations in the cases of 705 patients and discovered no significant delay in time to computerized tomography or change in resuscitation times for patients with family members present in the trauma room. Nigrovic et al. (2009) examined success rates for lumbar puncture of over 1400 pediatric patients and found no significant correlation between family member presence and traumatic or unobtainable lumbar punctures. Sacchetti et al. (2005) observed 37 pediatric patients undergoing invasive procedures and reported 2 cases to have had minor interruptions by present family members. Both procedures continued after adequate education of the family member with no significant delay of care. Basol et al. (2009) reported on the institution of a policy providing family members the option to be present during resuscitation of a family and the authors stated no interference of care or negative experiences with family members. The single study that indicated interference with performance was done by Fernandez et al. (2009) with 2nd and 3rd year emergency medicine residents in the simulation laboratory performing resuscitation scenarios. This study demonstrated a significant delay to initiation of cardiopulmonary resuscitation and medication administration in those groups with simulated family members present. The author stated that although the simulation used in this study was high-fidelity, it was still simulation. A recent study (Bjorshol, 2011) evaluated whether socio-emotional stress affected the quality of cardiopulmonary resuscitation during advanced life support in a simulated manikin model. This study with paramedics demonstrated no effect of stress on quality of CPR; this was also a simulation study.

Family Member Presence Policy

Basol et al. (2009) relate their experiences with implementing a policy regarding family member presence. The staff stated support for the concept, but moreover stated the need for a policy to provide consistency, guidelines and improve communication among the team. Madden & Condon (2007) surveyed 90 trauma nurses in Ireland and found that 74% preferred to have a written policy on the practice, although none had one in place. Howlett, et al (2010) report that the existence of a hospital policy influenced provider attitudes toward family presence.

Description of Decision Options/Interventions and the Level of Recommendation

Please note that the references listed after each recommendation represent the evidence considered when making the recommendation. This does not mean that the evidence in each individual reference supports the recommendation

1. There is little or no evidence to indicate that the practice of family member presence is detrimental to the patient, the family or the health care team. **Level B – Moderate** (O'Connell et al., 2007; Nigrovic et al., 2009; Sacchetti et al., 2005; Fernandez et al. 2009; Bjorshol, 2011)
2. There is some evidence from the international literature that acceptance of family presence may have some cultural basis. **Level B – Moderate** (Gunes and Zaybek, 2009; Al-Mutair, Plummer, Copnell , 2012; Koberich, S., Kaltwasser, A., Rothaug, O., Albarran, J., 2010; Leung and Chow, 2012).
3. There is evidence that health care professionals support the presence of a designated health care professional assigned to present family members to provide explanation and comfort. **Level B – Moderate** (Basol et al., 2009; Dingeman et al., 2007; ENA, 2007; Fallis & Pereira, 2009; Kuzin et al., 2007; Madden & Condon, 2007; McClement et al., 2009; O'Connell et al., 2007)
4. There is some evidence that a policy regarding family member presence provides structure and support to health care professionals involved in this practice. **Level B – Moderate** (Basol et al. 2009; Madden & Condon, 2007; Howlett, et al., 2010)
5. Family member presence during invasive procedures or resuscitation should be offered as an option to appropriate family members and should be based on written institution policy. **Level B – Moderate** (Basol et al. 2009; Madden & Condon, 2007; Howlett, et al., 2010)

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