FAMILY PRESENCE DURING TRAUMA ACTIVATIONS AND MEDICAL RESUSCITATIONS IN A PEDIATRIC EMERGENCY DEPARTMENT: AN EVIDENCE-BASED PRACTICE PROJECT

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Introduction: The existing family presence literature indicates that implementation of a family presence policy can result in positive outcomes. The purpose of our evidence-based practice project was to evaluate a family presence intervention using the 6 A’s of the evidence cycle (ask, acquire, appraise, apply, analyze, and adopt/adapt). For step 1 (ask), we propose the following question: Is it feasible to implement a family presence intervention during trauma team activations and medical resuscitations in a pediatric emergency department using national guidelines to ensure appropriate family member behavior and uninterrupted patient care?

Methods: Regarding steps 2 through 4 (acquire, appraise, and apply), our demonstration project was conducted in a pediatric emergency department during the implementation of a new family presence policy. Our family presence intervention incorporated current appraisal of literature and national guidelines including family screening, family preparation, and use of family presence facilitators. We evaluated whether it was feasible to implement the steps of our intervention and whether the intervention was safe in ensuring uninterrupted patient care.

Results: With regard to step 5 (analyze), family presence was evaluated in 106 events, in which 96 families were deemed appropriate and chose to be present. Nearly all families (96%) were screened before entering the room, and all were deemed appropriate candidates. Facilitators guided the family during all events. One family presence event was terminated. In all cases patient care was not interrupted.

Discussion: Regarding step 6 (adopt/adapt), our findings document the feasibility of implementing a family presence intervention in a pediatric emergency department while ensuring uninterrupted patient care. We have adopted family presence as a standard practice. This project can serve as the prototype for others.

Key words: Evidence-based family presence program; Family presence during CPR; Family-witnessed CPR; Trauma stats, medical alerts, codes; Pediatric emergency nursing; Pediatric emergency medicine
Standard practice in most emergency departments precludes family presence during emergency procedures. It is estimated that only 5% of emergency departments have written family presence policies. One of the most compelling arguments against family presence is the fear that families might lose emotional control and interrupt patient care. Interruption of care may negatively affect patient safety and therefore should be avoided particularly during critical procedures. Ensuring patient safety through uninterrupted patient care is crucial for the successful practice of family presence.

Before the introduction of a family presence policy in our emergency department, family presence was practiced sporadically and without formal guidelines. Our goal was to establish a standardized protocol that would ensure all families were presented with the option of family presence and protect the safety of patients, families, and staff. We believed that the policy should be based on best evidence, represent consensus opinion of involved staff and leadership, and define the steps for implementing family presence without interruption of patient care.

An organized roadmap is important to successful implementation and enculturation of new practice. The updated ENA guidelines for family presence, Presenting the Option for Family Presence, recommend that the process for establishing a family presence program be guided by models of evidence-based practice (EBP) to promote quality patient care. The purpose of this article is to describe the development, implementation, and evaluation of a family presence program using the steps of an EBP model. We combined the steps outlined in ENA’s guidelines for developing a family presence program with the steps of the evidence cycle, which includes the 5 A’s (ask, acquire, appraise, apply, and analyze), and added a sixth A: adapt/adopt (Figure).

**Aims**

**STEP 1: ASK CLINICAL QUESTION**

The development of our ED family presence program began with emergency nurses and physicians who strongly advocated that families be present with their children during every level of ED care. An interdisciplinary team consisting of the emergency clinical nurse specialist, pediatric emergency medicine physicians, an ED social worker, staff nurses, and a nursing research mentor with expertise in family presence was formed. We also elicited the support of ED nursing and medical leadership. The team established the aims of our EBP project: to determine the feasibility of implementing a family presence policy and procedure during trauma team activations (trauma stats) and medical resuscitations (medical alerts) based on national guidelines and determine the ability of this practice to ensure appropriate family member behavior and uninterrupted patient care. To achieve this aim, we evaluated the following research questions: (1) Is it feasible to implement a family presence policy and procedure for patients during trauma stats and medical alerts in a pediatric emergency department (process evaluation)? (2) Is the implementation of a family presence policy and procedure during trauma stats and medical alerts effective in ensuring safe and appropriate family member behavior while at the bedside that results in uninterrupted patient care (outcome evaluation)?

**STEP 2 AND STEP 3: ACQUIRE AND APPRAISE EVIDENCE ON FAMILY PRESENCE**

Evidence was acquired by review of relevant published studies, guidelines, position statements, and recommendations from professional organizations. We also conducted a sur-

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**FIGURE**

Implementing and evaluating a family presence intervention using the 6 A’s of the evidence cycle.
vey of staff’s attitudes and beliefs. Our appraisal of the literature revealed only 2 randomized clinical trials. Both documented multiple benefits of family presence for families; one terminated the trial early because the researchers became convinced of the benefits for family and no longer believed it was appropriate to deny family presence to the control group.

The majority of published studies evaluating family member presence use descriptive or survey methodology. In most of the sample sizes are relatively small. However, the findings from these studies consistently document multiple benefits of the intervention for families. Studies describing family presence events demonstrate positive outcomes of family presence for family members that included (1) removing the family’s doubt about the patient’s situation and allowing them to see that everything possible was being done, (2) reducing their anxiety and fear about what is happening to their loved one, and (3) maintaining the family unit and need to be together. In addition, when death occurred, families have reported that their presence gave them a sense of closure and facilitated the grief process.

Findings from published health care provider surveys document that having families at the bedside (1) facilitated the opportunity to educate families about the patient’s condition, (2) served as a reminder to staff of the patient’s dignity and need for privacy and pain management, and (3) encouraged increased professionalism in conversations and behavior at the bedside. Although providers often fear families will lose emotional control and interrupt patient care during the family presence experience, that fear is unfounded in the literature. In multiple studies, in various settings, evaluating over 600 family presence events, no direct or physical interference with patient care by family members has been documented. Three of these studies incorporated ENA’s guidelines in their family presence protocol, which included a family presence facilitator to support family members.

Professional organizations such as the ENA, American Association of Critical-Care Nurses, Society of Critical Care Medicine, Emergency Medical Services for Children, American Heart Association, National Association of Social Workers, National Association of Emergency Medical Technicians, American College of Emergency Physicians, and American Academy of Pediatrics all endorse the option of family presence during resuscitation and/or invasive procedures. The “Report of the National Consensus Conference on Family Presence during Pediatric Cardiopulmonary Resuscitation and Procedures” included representation from 18 national organizations. This report includes recommendations that we incorporated into our policy and procedure for implementing family presence, including evaluation of the family as a candidate for bedside presence, documentation of reasons for not offering the option, and guidelines that focus on the safety of the patient, family, and health care team.

We also evaluated ENA’s guidelines, Presenting the Option for Family Presence, and consulted with 2 pediatric emergency departments with established family presence programs who shared their policy and procedures (i.e., Children’s Hospital of Philadelphia, Philadelphia, PA and Children’s Medical Center, Dallas, TX).

In addition, our team conducted an anonymous survey of ED nursing and physician staff attitudes and beliefs about family presence. The survey was distributed to 80 nurses and 20 physicians in our department, with a 40% response rate. Findings revealed that 75% of respondents agreed that family members should have the option of being present during resuscitation. Ninety-six percent reported that they had been involved in a resuscitation in which parents were present; none had an interruption in care. Suggestions offered by survey participants included having social work present to support the family at all times, assessing the family before offering the option of family presence, and implementing a policy and procedure to ensure consistency.

Our interdisciplinary team appraised all of the resources discussed previously and highlighted the elements of best evidence for our family presence intervention. We also used our staff survey to identify barriers unique to our ED culture. An example of an issue unique to our setting was our ability to use social work staff as the family presence facilitator 7 days a week from 8 am to 1 am, with emergency nurse coverage of this role during the remaining early morning hours.

Methods

Design, Setting, and Sample
Our EBP project used a descriptive-observational design to evaluate our family presence intervention. This project was approved by our institutional review board. The study was conducted in the pediatric emergency department of an urban, level I pediatric trauma center in the mid-Atlantic region. Our emergency department sees over 75,000 pediatric patients and families per year. Approximately 2% of patients (1,500) are treated for traumatic or medical emergencies requiring resuscitation in 1 of 2 code rooms. Each code room has the potential to house 2 patients simultaneously and has immediate access to lifesaving equipment, monitoring, and medication. The need for trauma team activation or medical alert resuscitation is
determined by the emergency physician. The medical alert team consists of an emergency physician, an anesthesiologist, a critical care physician, 4 or 5 emergency nurses, a respiratory therapist, a radiology technician, a social worker, a chaplain, a nurse administrator, and a laboratory transporter. The trauma team is identical to the medical alert team but also includes a pediatric surgeon and an operating room nurse.

The first 100 families of all pediatric patients requiring a trauma stat or medical alert resuscitation were eligible for inclusion in the project. Parents were excluded if the family presence facilitator determined that they were emotionally unstable, combative, or showing behaviors consistent with an altered mental status. Caution was taken when offering the option of family presence to parents who were suspected of child abuse. Parents also were excluded if the direct care provider in charge of the event did not agree to family presence or if the family declined the family presence option.

**Family Presence Intervention**

Application of the evidence began by developing our policy and procedure for family presence during invasive procedures and resuscitation. This procedure incorporates interventions the interdisciplinary team judged to be effective based on our review of the literature and other resources discussed previously. Examples include the use of a family presence facilitator and physician agreement for family bedside presence. Before the option of family presence is offered, family members’ behavior and responses are assessed to determine whether they are appropriate candidates for family presence by the family presence facilitator. Appropriate candidates demonstrated coping mechanisms and the absence of combative behavior, extreme emotional instability, substance abuse, and behaviors consistent with altered mental status. If the family member is assessed as an appropriate candidate for family presence, they are offered the option. If the family desires to be at the bedside, the team is notified and the family presence facilitator prepares the family for environmental stimuli, remains with the family for support and continued emotional evaluation throughout the event, and transitions the family to the next level of care. The facilitator role at our institution is fulfilled primarily by a social worker specifically trained for this role. Our facilitators do not have any other role within the trauma or medical alert team.

The policy and procedure was appraised by all relevant staff including surgical services, critical care service, anesthesia, crisis/admission nurses, and nurse supervisors to obtain their feedback and comments. Our hospital’s legal service also was consulted. Our family presence policy and procedure was provisionally approved pending its evaluation. We educated the emergency staff nurses and physicians and other involved staff on the policy and procedure and on the EBP project using classroom education for each discipline, before implementation. Social work staff and emergency charge nurses were provided with augmented education to prepare them to function in the family presence facilitator role. The emergency clinical nurse specialist worked in the resuscitation bay with social work staff to determine medical terminology that required further clarification and education to assist in providing support to families. After the education phase, we implemented the family presence intervention for all families who were assessed as suitable candidates for bedside presence and who accepted the option to be present. Each family had the option of 1 family member being present in the code room at one time, and when space allowed, the option of 2 family members was offered.

**Process and Outcome Variables**

We developed a family presence data collection tool for our process and outcome evaluation of the family presence intervention (as described in a previous publication\(^2\)). The ED family presence data collection tool was completed by the family presence facilitator during the first 100 family presence events. The tool included demographic data such as type of event (trauma stat or medical alert), number of family members present, and relationship of family members present. Process evaluation data included questions found in Table 1 about the feasibility of implementing the steps in the family presence policy and procedure. The tool also included questions found in Table 2 about evaluation outcome data on the safety of the family presence intervention.

### Table 1: ED Family Presence Data Collection Process Evaluation Questions

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<th>Question</th>
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<td>1. Was the family member assessed and deemed an appropriate candidate for family presence?</td>
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<td>2. Was family presence discussed with the team and agreement sought with the primary physician in charge of the resuscitation?</td>
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<td>3. Was the family offered the option of family presence? If not, why?</td>
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<td>4. Did the family accept the option to be present?</td>
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<td>5. Was the family prepared for the family presence experience before entrance to the resuscitation room?</td>
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<td>6. Did the family presence facilitator remain present with the family during the entire family presence event?</td>
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Results

STEP 5: ANALYZE PROCESS AND OUTCOMES OF FAMILY PRESENCE INTERVENTION

One hundred six family presence events were evaluated for family presence in our pediatric emergency department during a trauma activation or medical resuscitation. Of these events, 3 (2.8%) were excluded from the analysis because the family was not present and one family was not physically present but family presence occurred via telephone. In addition, 6 families (5.6%) were excluded because the attending physician did not agree to family presence (2 events), because there was limited space in the room (2 events), because of legal concerns (1 event), and because the family member was assessed as an inappropriate candidate for family presence (1 event). This family member was judged physically aggressive and uncooperative and showed an altered mental status. She was not offered the option to be present, and although she attempted to enter the resuscitation room, she was guided to a family waiting area by the family presence facilitator and kept updated about her child’s status.

Of the 96 family presence events (90.5%) included in the analysis, 69 (72%) involved family presence during trauma activations and 27 (28%) during medical resuscitations. Because there were no statistically significant differences between the trauma and medical groups in the variables evaluated except for family arrival time, the 2 groups were combined for the analysis and are reported here as a total group. The only statistically significant difference between the 2 groups was that there were more families (8 families [11.6%]) in the trauma activation group who arrived after the patient was admitted to the emergency department than in the medical resuscitation group (1 family [3.8%]) (P = .007).

Most families (n = 86 [90%]) arrived in the emergency department concurrent with the patient’s arrival. Nearly all of the families (n = 92 [96%]) were screened for family presence before entering the room. Four were screened in the room because at triage, they were immediately escorted to the code room. All (n = 96 [100%]) were deemed as appropriate candidates for bedside presence. In the majority of cases, family presence was discussed with the attending physician in charge of the events (n = 82 [86%]) and the physician agreed (n = 88 [92%]). All families (n = 96) wanted to be present. Most families (n = 88 [92%]) were prepared for family presence before entering the room. In contrast, 8 (8%) were not prepared because they arrived with the child and immediately went into the room before the family presence facilitator arrived. The majority of our events had 1 (n = 67 [70%]) or 2 (n = 20 [21%]) family members present at the bedside, although during 1 event, space and resources allowed more than 4 family members to be present. Mothers (n = 71 [74%]) were the most common family member present, followed by fathers (n = 27 [28%]) and siblings (n = 9 [9%]). While in the room, 51 family members (53%) were observed by the family presence facilitator to be quiet, 32 (33%) were anxious but cooperative, 16 (17%) were distracted but able to follow instructions, and 13 (14%) were distressed and crying but consolable. Family presence was terminated during only 1 event. This family member became overwhelmed and asked the facilitator if she could leave the room. In 100% of the family presence events, patient care was not interrupted.

Discussion

STEP 6: DECIDE WHETHER TO ADAPT/ADOPT OR REJECT NEW INTERVENTION INTO PRACTICE

By use of the steps of the evidence cycle, the results of our family presence project indicate that it is feasible to implement a family presence intervention, based on national guidelines, in a pediatric emergency department during trauma and medical resuscitations. We also demonstrated that the intervention is able to protect patient safety by ensuring uninterrupted patient care.

Our family presence intervention included the use of a family presence facilitator to assess and support the family. The majority of families in our study were prescreened and prepared for bedside presence before entering the resuscitation room. However, in several cases the child and parent arrived in the resuscitation room together, because on arrival to triage, they were immediately escorted to the code room. Alternate methods of prescreening and preparation for families must be considered when the child and caregiver arrive together in the resuscitation room. This may
occur for several reasons: (1) more EMS providers are allowing caregivers to accompany children in ambulances, (2) caregivers often drive critically ill patients to the hospital for care, and (3) medical emergencies can occur after the patient has entered the emergency department. On the basis of our policy and procedure, the emergency charge nurse assumed the role of family presence facilitator until social work staff arrived.

All families who were deemed appropriate candidates accepted the family presence option. This finding is consistent with those of other authors who have found that nearly all parents who are offered the option choose to be with their child.17,19 Family presence facilitators remained with families throughout the resuscitation. No families exhibited disruptive behavior requiring termination of family presence, and none interrupted patient care. However, family presence facilitators are trained to identify escalating behavior and remove a family member from the setting before he or she becomes disruptive.32 One family member did request to leave the room. The facilitator found a quiet place for the parent and remained with her as the resuscitation continued. Our findings support those of other authors14,17-19 and provide further evidence of the important role of the family presence facilitator in guiding families through the event to ensure uninterrupted patient care. In addition, our demonstration project provides additional evidence to support the recommendations from ENA’s family presence guidelines2 and expands the application of family presence during pediatric trauma stats and medical alerts.

We shared our findings with our ED and surgical staff. After our evaluation, our family presence policy and procedure had been permanently adopted into standard practice. Ongoing evaluation continues. Our ED staff is consulting with other hospital units to implement family presence. This demonstration project, combined with the findings from other studies conducted by us,14,17-19 served as preliminary data for our funded, 3-year, multicenter study evaluating the practice of family presence during pediatric trauma team activations (funded by the Health Resources and Services Administration, Maternal and Child Health Bureau, and Emergency Medical Services for Children Program’s Targeted Issues grant FY08).

**Implications for Emergency Nurses**

To our knowledge, there are no published examples of how to develop, implement, and evaluate family presence using the steps of the evidence cycle. This study, which operationalizes these steps combined with the ENA’s family presence guidelines, can serve as the organizational roadmap for others who wish to implement similar programs and evaluate the feasibility and safety of a family presence intervention at their institution.

**Conclusions**

The success of our family presence program was dependent on consistency in practice established by the policy and procedure. Our findings document the feasibility of implementing our family presence intervention and its safety in ensuring uninterrupted patient care. The intervention has been adopted for standard practice in our pediatric emergency department. This study can be used as the prototype for implementing family presence using the steps of the evidence cycle.

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