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Implementation of a Standardized Process to Increase Promotion of Family Presence During Resuscitation

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Abstract

BACKGROUND: Family Presence During Resuscitation (FPDR), has been studied and recommended as an important and relevant practice for decades, yet it remains controversial with frequent barriers to implementation. The benefits of this practice are numerous; and to truly embrace shared decision making, nurses and providers must encourage patients and families to participate in all aspects of care, even during resuscitation events. As evidence supporting the emotional and psychological benefits of FPDR began to grow, however, a global pandemic brought family presence to an abrupt halt.

METHODS: This quality improvement project's focus was to standardize a process for offering and allowing FPDR at a community hospital. A comprehensive set of interventions were implemented to increase prevalence of FPDR throughout the organization including a formal policy and standard operating procedures, developing a Family Support Provider (FSP) role, and providing education to staff. These interventions were evaluated using review of Electronic Medical Record (EMR) data and Self-Knowledge Assessment tests before and after the education sessions.

RESULTS: Policy changes were adopted and key findings from this project revealed that the hospital practices FPDR, but inconsistently. Only 18% of codes over 3 years included Family Presence. Likely factors effecting these trends include the changes in visitation policies during the COVID-19 pandemic. There was a high completion rate of designated nurses in the FSP role (84%) who had taken the education module that completed the Self-Knowledge Assessment. Fifty percent of the correct answers in this assessment increased after the FPDR training.

CONCLUSIONS: The presence of families during resuscitation events has been overwhelmingly proven to be a beneficial practice, however, success of this practice is reliant on the development

and standardization of distinct family support roles, policies, and educational programs. Further work in this area is required to ensure FPDR is built as standard of care in this organization, and many others.

Keywords: Family Presence, Cardiopulmonary Resuscitation, Family Support Provider, Family Presence During Resuscitation, Shared Decision-Making, Nursing

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Introduction

The current movement in healthcare increasingly embodies a model of shared decision-making and encouraging patient and family-centered approaches to care. Respecting the patient's wishes and values, as well as including support persons in their care team, is essential in improving practice, promoting better outcomes, and lowering costs (Powers & Reeve, 2020). For decades, Family Presence During Resuscitation (FPDR), a pinnacle in patient and family-centered care has been studied and recommended as an important and relevant practice. Yet, it remains often controversial; with continued dispute over the risks versus benefits, as well as mixed opinions from the care team and frequent barriers to practice.

There are a multitude of benefits identified in the literature over the years to support FPDR, and many prestigious associations have documented their advocacy of the practice. The American Heart Association (AHA), American Association of Critical Care Nurses (AACN), and the Emergency Nurses Association (ENA) all recommend that healthcare facilities allow FPDR and encourage developing policies to support this practice (Doolin et al., 2010). It has been widely identified that family members who were present during cardiopulmonary resuscitation (CPR) found the experience to help with their grieving process, aid in closure, and assist in comforting the patient (Bradley, Keithline, Petrocelli, Scanlon, and Parkosewich, 2017). Advantages to family presence include the notion that observing resuscitation efforts may help to reinforce to families that staff tried their best to save their loved one's life (Downar & Kritak, 2013). Advocating for FPDR also has been shown to foster trust between the family and the healthcare team, as well as promoting more professional attitudes of healthcare providers; and increasing collaboration in decision making (Doolin et al., 2010).

Perhaps the most argued view on FPDR is simply the fear of disruption to the code environment. There are many situations that may be harmful to have family presence during resuscitation efforts, for example, if it causes safety concerns for patient, staff, or bystanders. It has been infrequently found that there could be delays in shock delivery during resuscitation or obtaining vascular access, airway access, and more medication errors, which identified potential for patient harm (Brasel, Entwistle & Sade, 2017). Risk for injury to a patient's family member is also possible if accidentally exposed to blood-borne pathogens during the resuscitation efforts (Brasel et al., 2017). Common concerns identified in the literature from nurse's perspectives on FPDR noted that staff would likely be unable to provide care to both the patient and family at the same time if problems were to arise; and highlighted that resuscitation always remains their top priority (Tudor, Berger, Polivka, Chlebowy and Thomas, 2014). Concerns brought up by patients when asked about FPDR were that the experience could be distressing for their loved ones; could give false hope about their condition; and many did not want this experience to be one of their last memories (Bradley et al., 2017).

Problem Description

The conclusions drawn from the literature determine that the benefits to family presence during resuscitation outweighs the potential risks identified. Current studies have largely disproven these risks, however, do cite other obstacles as known barriers – such as staffing and environmental limitations (Powers, Duncan, Twibell, 2022). The evidence makes it clear that for FPDR to be successful, standardized guidelines, practices and policies must be implemented. Many professional healthcare organizations have formally recommended that healthcare facilities allow FPDR as a standard of care and encourage developing policies to support this practice (Doolin et al, 2010). Of note, much of the evidence supporting FPDR also indicates that

even in hospitals which offer this practice, it is often inconsistent and rare that formal policies are in place (Bradley, Parkosewich, Chuong, 2018). The exemption of standardized policies or guidelines for FPDR can result in inconsistent practice, role confusion, and lack of support, defeating the overarching goal of providing patient and family-centered care (Doolin et al, 2010).

Available Knowledge

Current recommendations from prominent healthcare organizations, such as the American Heart Association (AHA) and American Association of Critical Care Nurses (AACN), encourage hospitals to create policies and procedures advocating for family presence during resuscitation. Key findings identified in the literature were consistent with these practice guidelines to assist in developing a standardized process for allowing FPDR in acute care organizations. Consistent policies addressing FPDR was found to be the best way to provide a patient-centered approach that supports collaborative decision-making among families and staff (Mowagan & Melby, 2019). Introduction of standardized guidelines would reduce the considerable variations and inconsistencies evident in current FPDR practices; as these emotionally charged and chaotic emergency events with stressed staff members can cause difficulty in rational decision-making about offering or allowing family presence (Giles et al., 2016). In the absence of formal policies, there can be much variability in healthcare professionals' preferences, priorities, and actions. Development of consistent plans and protocols can decrease perceived barriers and concerns of staff, address bias and lack of confidence, and can integrate family presence as a reliable and meaningful practice (Kosowan & Jensen, 2011). Many institutions saw more favorable attitudes and support among providers after a protocol was implemented, with one study noting an increase from 44% to 51% in rates of participation of FPDR (Pankop et al., 2013).

A vital component of successful FPDR policy implementation found in the literature is the understanding of its contraindications. There are times when it will not be appropriate to have family present during resuscitation efforts, as it was discovered in multiple studies that policies must include specific screening criteria outlined prior to offering this opportunity (Giles et al., 2016; Pankop et al., 2013). Exclusions would be made to family members or support persons who exhibit characteristics of emotional distress, combativeness, intoxication, or altered mental status (Pankop et al., 2013). It is crucial to be able to assess the family members' emotional and behavioral stability before bringing them into the code environment, and if it was determined family members were disruptive or could impact the safety of the situation, then FPDR would not be offered (Balogh-Mitchell, 2012). Subsequently, it should be stated up front to patients and family that FPDR is an *option*, not a requirement; and that support and communication would still be provided to family should they choose not to be directly present (Pankop et al, 2013).

One of the most important findings from the literature, that was determined essential for success of the FPDR process in addition to policy development, was the development of a "Facilitator" or family support role. A member of the interdisciplinary team should be identified prior to a code situation to ensure that the family is informed, supported, and included throughout the entire resuscitation process. This role was found to be filled by different professions – social workers or clergy members in one study (Mureau-Haines, 2017) versus nursing, specifically charge nurse or a supervisory role, in another (Balogh-Mitchell, 2012). These professions were the most common facilitators in many institutions, given the overall level of experience in caring for patients and families during a crisis (Mureau-Haines, 2017). Responsibilities of this role would include providing support to families during the event, as well as special training provided to handle sensitive family members, and perform screening

procedures for any contraindications (Mureau-Haines, 2017). It was frequently noted that the facilitator should never be a direct participant in the resuscitation event itself, to afford the family their full attention, and not have other responsibilities during that time (Pankop et al., 2013).

Lastly, the final theme consistently supported in the literature was including educational sessions to staff. Training specific to FPDR; including presenting supporting evidence and disproving common negative perceptions; was found to have positive effects on healthcare professional's attitudes toward the practice, as well as promoted teamwork during resuscitation events (Pankop et al., 2013). Reinforcing the benefits of FPDR was found to be an important first step in shifting negative attitudes or fears on the subject and any pre-existing bias (Giles et al., 2016). It was suggested that simulation training on FPDR would be an excellent addition and could increase both confidence and competence while supporting family members in these difficult situations (Giles et al., 2016). The development of formal guidelines for implementation, a structured curriculum for training of staff, and assigning family support facilitators can result in a richer resuscitation team that can *effectively embrace FPDR*.

Rationale

The movement to allow family presence has steadily evolved over time due to the support of prominent professional organizations like the Emergency Nurse's Association (ENA), American Association of Critical Care Nurses (AACN), American Heart Association (AHA), and the American Academy of Pediatrics (AAP). Review of current evidence has found that the guidelines set forth by the ENA: *Clinical Practice Guideline for Family Presence during Invasive Procedures and Resuscitation* are the "most frequently used resources to develop family presence protocols, and they provide a systematic approach to ensure patient and family-centered care (eg, identifying the champions, establishing a task force, assessing internal resources and

support, developing an implementation plan, and evaluating the success of the program)" (Pankop et al, 2013 p. 285).

Further guidelines developed by the AACN is a Practice Alert, published in 2010, that encouraged a culture shift towards offering FPDR as an expectation. This document outlined how health care institutions should be providing the option of family presence for all patients undergoing resuscitation or invasive procedures, and specifically stated that all patient care units should have developed their own written protocols to govern the practice of family presence (AACN, 2010) (Pankop et al, 2013). These examples exhibit the importance of aligning with current practice standards, and using these guidelines along with other literature, assisted in replicating and developing effective policies on FPDR (Bradley et al., 2018).

Successful implementation of new practice methods and policies require the utilization of theoretical frameworks and quality improvement models. Incorporating both the Plan-Do-Study-Act (PDSA) cycle and Lewin's Change Theory assisted in intervention development for this project to sustain lasting change. Adopting a practice that has long since been seen as controversial required a structured approach to determine forces that would drive change in the organization, as well as identifying barriers that could impede it (Nursing Theory, 2020). Lewin's 3-step Change model was used to integrate FPDR into the organization to ensure buy-in with staff and positive reception utilizing the unfreezing, moving, and refreezing stages (Bradley et al., 2018). Unfreezing behaviors and attitudes require highlighting the need for change and exhibiting the importance of FPDR in shared decision-making. The moving stage consisted of managing the practice change, with policy development, preparation, and education of staff. Finally, the refreezing stage will aim to produce a culture shift in the organization and solidify new behaviors and attitudes in this practice change with staff.

In alignment with the 3-step Change Model, incorporating a PDSA cycle worked effectively to analyze the data during the "moving" phase, and determine if any changes need to be made. Piloting this process on the inpatient units and Emergency Department of the organization; in addition to piloting the education to a subset of nurses; will allow for refinement of the policy or other aspects of the change process, based on what was learned from the initial implementation and listening to feedback from staff (Institute for Healthcare Improvement, 2022). This will minimize resistance to the practice change and promote successful implementation on a broader scale in the organization in the future.

Specific Aims

Despite clear practice guidelines & recommendations from professional organizations on Family Presence During Resuscitation for many years, there is little evidence that hospitals consistently develop formal policies or provide education to staff. Per the AACN Practice Alert (2010), only 5 percent of critical care units had written policies allowing family presence. Remarkably, an umbrella review completed on *The Effect of Family Presence During Resuscitation and Invasive Procedures on Patient and Families* noted that, over a decade later, there remains a gap in this area and a lack of clinical policy guidelines (Vardanjani et al., 2021). The literature clearly supports developing a standardized process for FPDR that includes policies/procedures, providing education for best practice and clear role definition of a family facilitator. At Exeter Hospital, there was no previous defined policy, procedure, or process for incorporating Family Presence During Resuscitation. Many of the inpatient units had different standards on offering/allowing the practice, or none at all; and staff often felt uncomfortable with family presence or how to promote it. In contrast, the Emergency Department of the hospital had more experience with FPDR, however, no formal guidelines or training was found.

The described benefits and risks associated with FPDR are important in recognizing how these guidelines should be put into place, and what components are most important for both the safety of healthcare professionals and patients/family members to include in these guidelines. The specific aim of this project was to develop and implement a standardized process for offering and allowing Family Presence During Resuscitation at Exeter Hospital. Specific goals of this change were to 1) Update current practice guidelines on resuscitation and create new policies/practice guidelines on FPDR; 2) Increase staff knowledge of FPDR, as well as increase staff confidence, with education and training modules. These goals targeted increasing overall prevalence of FPDR in the organization in addition to increasing knowledge of staff after assigned education modules.

Methods

Context

Exeter Hospital; is a 100-bed tax exempt, community-based hospital and level III trauma center in the Seacoast area of New Hampshire. They embrace a simple motto, "Excellence. Every patient. Every time", which is characteristic of its culture and adopted Framework for Excellence (Exeter Health Resources, 2019). As a Magnet® organization since 2013, Exeter Hospital prides themselves on their quality patient care and innovative nursing practice. The organization utilizes a professional practice model of Relationship Based Care (RBC) to guide all patient encounters, recognizing that healthcare is provided through relationships, making sure that patients and their families feel their needs and priorities are met together. The practice of FPDR translates well into this care model, as it is not only supported across healthcare disciplines, but also aligns with the central concepts of family-centeredness (Schafer & Kremer, 2022). It has been well documented that Patient and Family-Centered Care leads to "better health

outcomes improved patient and family experience of care, better clinician and staff satisfaction, and wiser allocation of resources" (Institute for Patient and Family Centered Care, 2022). These practices align with the mission and values of the organization, including those of clinician and staff members from all disciplines, departments, and services (Exeter Hospital, 2016). Embracing a patient and family-centered approach to care during resuscitation events through FPDR allows for a natural continuation of the organization's framework and culture.

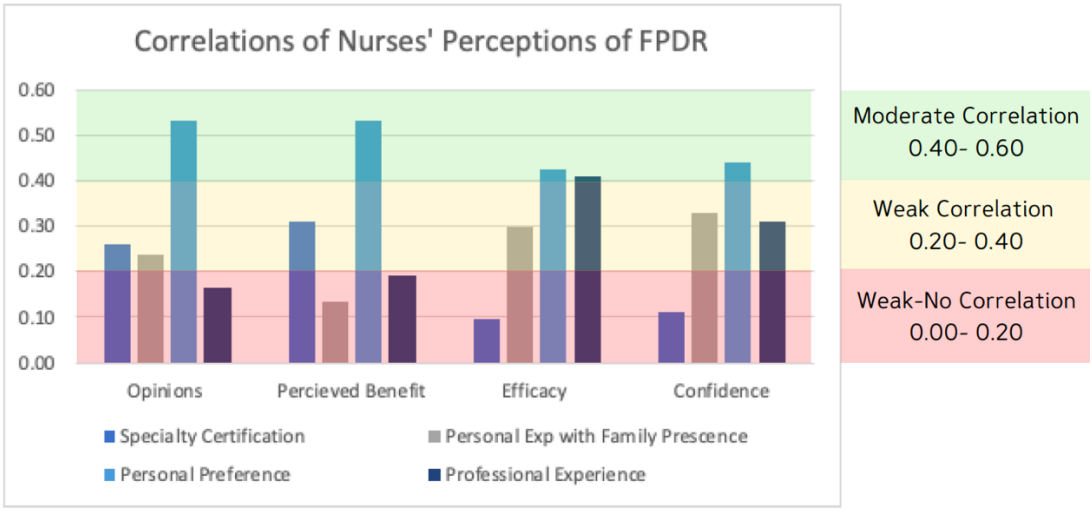
The Emergency Department (ED) at Exeter Hospital, like any ED environment, frequently are involved in cardiac arrests requiring cardiopulmonary resuscitation (CPR), so staff are anecdotally noted to offer FPDR on a more consistent basis in this care area; yet there was no evidence of any formal policy defined here, or elsewhere in the organization. Other units in the hospital - such as the Intensive Care Unit (ICU), Progressive Care Unit (PCU) and medical/surgical floors; have less frequent experience with cardiac arrest and CPR, and are noted to practice FPDR inconsistently, with some staff reporting not at all. To determine a basis for this lack of implementation and inconsistency, and to identify current perceptions and attitudes towards FPDR among staff, an initial assessment in the form of a research study was conducted within the organization from 2020-2021. Studies in the literature have found that nurses with specific demographics such as those who work in an ICU, have experience with resuscitation or mock codes, and are Advanced Cardiac Life Support (ACLS) certified, reported significantly more self-confidence with FPDR, as well as an association with greater perceived benefits of the practice (Tudor et al., 2014).

At Exeter Hospital, there were similarities found during this assessment that was able to be compared to previous findings on the subject, utilizing the same evidence-based tool to draw conclusions about nurses' perceptions on FPDR (Hollis & Greene, 2021). A total of 58 nurses

completed a survey, out of 202 active full-time, part-time, and per diem nurses for a response rate of 29%. Out of the nurses that completed the survey – 52% work in critical care (identified as ED or ICU/PCU) and 48% work on a medical-surgical unit. The majority of respondents had 11-20 years of experience (37%). Most hold a bachelor's degree (58%), whereas 26% hold a master's degree or higher. Out of all the survey respondents, 51% hold a specialty certification, most commonly CCRN or PCCN. A correlation was found between nurses' perceived benefits and confidence with nurses who held specialty certifications at our community hospital setting, similar to what was found in the literature, but interestingly the results of our study found that nurses were more likely to be influenced most by personal preference and experience on FPDR, rather than training or work environment (Figure 1). It was found that nurses who would allow family to be present during their own resuscitation had the strongest correlation to all aspects of confidence, perceived benefits, and efficacy. Nurses who also had previous personal and professional experience had greater confidence levels. Specialty certification did seem to have a greater effect on nurses' perceived benefits of FPDR, however, which was comparable to previous evidence.

Figure 1.

Baseline Needs Assessment Nurses' Perceptions on FPDR Correlation Table



Open-ended responses at the end of the survey allowed for respondents to write in reasons they would or would not invite family presence, and these responses identified 5 common themes. Three themes were identified for the question: "Reasons I ***would not*** invite family into a code" (Figure 2), which was determined to be perceived barriers for offering FPDR. The most common concern was that FPDR may be overly traumatic for families, (45% of nurses identified this barrier). 21% of nurses reported that patients or family may have specifically requested family not be present, and 36% of nurses reported FPDR may be disruptive to resuscitation efforts. "Reasons I ***would*** invite family into a code" (Figure 3) was determined to be perceived benefits of offering FPDR. Two unique themes were identified, with 29% of nurses stating that FPDR gave family members closure, and 46% believed it would help families understand the resuscitation process.

Figure 2.

Nurses Perceptions of Barriers to Family Presence During Resuscitation

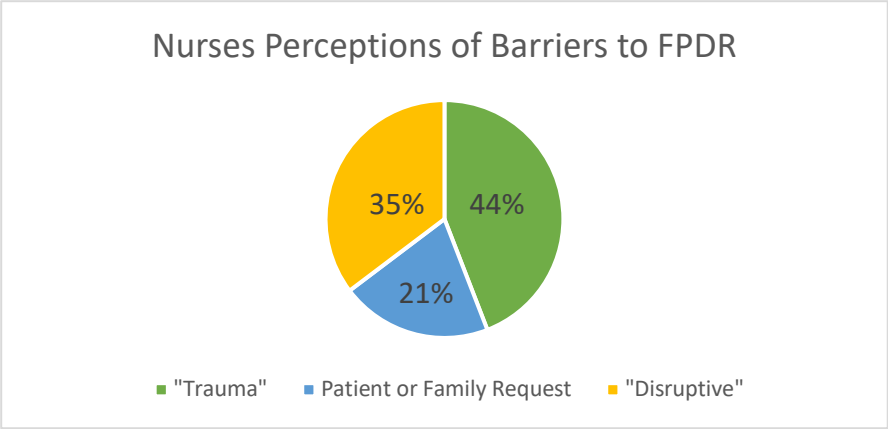
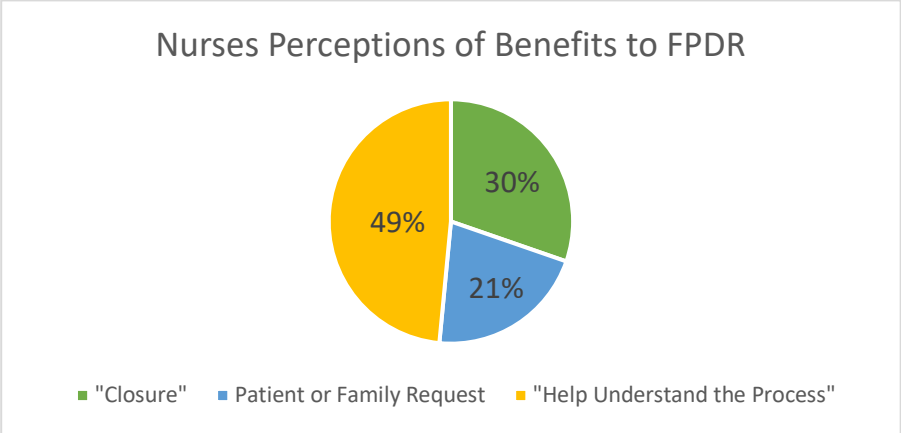


Figure 3.

Nurses Perceptions of Benefits to Family Presence During Resuscitation



Recommendations from this study were therefore based on providing further education and training on FPDR to nursing staff in all areas of the hospital (Hollis & Greene, 2021). Due to the strong influence of personal preferences surrounding FPDR, the findings suggested that initial interventions should be focused on education to staff on the benefits of the practice and addressing potential biases. An impactful way to also address these findings is to have a formal policy on family presence that supports staff and clarifies their perceived barriers. Finally, since professional experience had strong correlations, providing mock codes and simulation experiences of resuscitation events – specifically those that include family presence – would increase exposure and allow for a safe space to prepare for these often-challenging interactions.

This will help address the common barriers identified as potential "disruption" or "traumatic" experiences of having family present.

It was encouraging that the findings of the needs assessment were supported by the relevant literature, stating an effective first step for implementing FPDR in an organization is to define policies and standards to ensure the safety of patients, families, and staff (Vardajani et al., 2021). Previously, the "Code Blue PC-CODE.003" policy is the only guideline that could be found with mention of family members during resuscitation efforts. This policy defined steps during a "Code Blue" in the hospital and outlined which staff member(s) would be assigned the family support role (Appendix A). There was no distinction of what that role entailed, or that family presence during the resuscitation efforts should or should not be offered. The previously assigned staff member that would "Attend to Family Members if present" was the nursing supervisor (referred to as the Clinical Resource Nurse at this facility), and it is worth noting that this staff member also had other roles assigned during the code, which would affect the ability to give full attention and support to family during this hectic time.

Interventions

To achieve the stated aim of this project, multiple interventions were implemented at Exeter Hospital to increase prevalence of FPDR throughout the organization. Most importantly, a formal policy outlining a standardized process for recommending FPDR was developed to be utilized during all identified resuscitation events throughout the organization. Having a formal policy will promote the culture that FPDR should be offered and allowed during all appropriate events at the organization, identifying patients who wish to have family present during resuscitation or those who do not, as well as provide a clear outline of contraindications to take into consideration when allowing family members this opportunity.

Policies

The existing "Code Blue PC-CODE.003" policy was updated to establish a more formal family support role that will be assigned during resuscitation events. The new policy explicitly delineates the "Family Support Provider" as a support provider role during in-hospital codes at the organization (Appendix B). Actions for this role include attending to family members if present and would facilitate supportive care per the subsequent Standard Operating Procedure that will be discussed in the next paragraph. Training was provided to those who will be in this role, such as how to handle difficult family members, and what duties are expected to be carried out before, during and after the event. Evidence supports not only having this role, but clear responsibilities and expectations for the role, is essential to success of a FPDR process (Pankop et al., 2013). The staff member that fills this role can be interdisciplinary, according to the literature, and is likely to be determined by current staffing patterns and vary between daytime working hours or off-shifts. Social workers or chaplain versus nursing are the most appropriate choices for this role based on training and knowledge of difficult conversations and crisis management (Mureau-Haines et al., 2017). At Exeter Hospital, it was determined that at this current time, nursing would be best utilized in this position, due to lack of 24/7 coverage of social work and chaplains.

Another update that needed to take place was to the hospital's Form #154 – Adult Cardiac Arrest Record or "code sheet". The previous document used from 2018-2021 included a checkbox for "Family at Bedside" that would demonstrate if family was present directly on the Cardiac Arrest Record that collected other code documentation (Appendix C). Unfortunately, in 2021 this form was updated, and the checkbox was removed for unknown reasons. When revising the code sheet, capturing family presence again was a priority, as the more visible these

terms are to staff, the more apt they are to practice it. The new form presents family presence as a standard no longer an option, with checkboxes for Family Presence "Accepted", "Family Declined", "Family Not Present" and "Family Support Provided" (Appendix D). A signature line for the FSP was also added to the signature lines at the bottom of the form as well. Updates also needed to be made to Form #1093 - Newborn Stabilization Flowsheet/ Cardiac Arrest Record Newborn, and Form # 1566 – Pediatric Cardiac Arrest Record (Appendix E & F). The same categories used in the Adult Cardiac Arrest Record and signature lines were added to these documents as well.

In addition to the current policy updates, a Standard Operating Procedure (SOP) was created that is cross referenced to the Code Blue policy (See Appendix G). The SOP was developed with the purpose to enhance patient and family-centered care during resuscitation events, while providing an individualized and holistic approach to the presence of family and ensuring that all are supported throughout the process. It includes definitions of terms used throughout the policy to standardize what is considered family presence, who are considered family members, what constitutes resuscitation events, and lastly, who would take on the role of Family Support Provider (FSP). Action steps in the SOP are referenced in a visual algorithm to provide a quick and easily navigated, color-coded tool to assist with comprehension during potentially chaotic events. The algorithm outlines steps to follow during a code, beginning with 1) a statement that our goal is to support FPDR to the greatest extent possible, 2) steps delineated for if family elects to be present (virtually or in person) or they decline to be present which, 3) includes criteria of "Disruptive/Unsafe Behavior" that the FSP would use to determine appropriateness for in-room family presence, and 4) caring for after the event. This was tailored

to Exeter Hospital from a similar flowchart developed in a quality improvement initiative by Mureau-Haines et al. (2017).

Collaboration on this document, as well as the updates to the Code Blue Policy and Cardiac Arrest Records, was done with multiple councils/committees in the hospital to ensure that relevant stakeholders were consulted. Patient Care Standards (PCS) is the shared governance council, made up of nurses from each department, charged with promoting evidence-based practice and patient safety and policy development at the hospital. This council reviewed the policy/SOP and assisted over several months with editing, formatting, and finally publishing the documents with a "Go-Live" date of October 18th, 2022. The hospital's Code Committee – an interdisciplinary team of providers, nurses, respiratory therapists, and paramedics – then approved the changes to the Code Blue Policy, as well as accepted the final draft of the SOP.

Education

Finally, educational training was provided to help eliminate bias, present the many benefits of FPDR, and outline the new proposed process. Due to the strong correlation of nurse's personal opinions surrounding FPDR on perceived barriers and benefits to the practice – a recommendation from the needs assessment survey was that initial educational interventions should be focused on reflection, as further training in this area would likely not be effective until these biases are addressed (Hollis & Greene, 2021). This training ensures that staff are well educated on FPDR best practice, understand their own roles during resuscitation, as well as the new role of the FSP in these scenarios.

The educational materials included an online Healthstream© module, a staff practice update, presentations at Unit Based Practice Council meetings, and resource binders for units. An evidence-based toolkit developed by Kantrowitz-Gordon et al. (2013) was used with permission

to develop the Healthstream© module titled: "Family Presence During Resuscitation Toolkit" into a comprehensive training for staff. The initial pilot of this training was assigned to designated RN's who met the criteria for FSP role on each unit (Clinical Leaders, Clinical Practice Leaders, Clinical Nurse Practice Coordinators, Charge RN's, and Admission RN's). The module begins with an initial Self-Knowledge Assessment, consisting of 10 true/false questions surrounding FPDR information (Appendix H). Once the pre-test is complete, participants enter the power point presentation education module that describes what FPDR is, why it is important, what a FSP is and what the role entails, a focus on how to support family with suggested phrasing and answers to common family questions during a code event (Appendix I), and an overview of the new policy changes. The module then provides three "simulation videos" that involve family presence scenarios across the lifespan: a) postpartum scenario; b) pediatric; and c) adult; each with the health care team reacting to their presence during and after the event (Appendix I). The videos were developed as part of the original toolkit produced by the University of Washington, are approximately 5 min in length and conclude with questions to allow for individual reflection and debriefing after the event (Appendix J). After completion of the module, the Self-Knowledge Assessment is administered again as the post-test.

Dissemination of the policy and documentation updates before the "go-live" took place in two ways: a practice update distributed to each unit, and presentations to Unit Based Practice Councils (UPBC) in the organization. This allowed for all RNs in appropriate departments to receive baseline education on FPDR until a later roll out of the full education module for FSP. The practice update included a brief synopsis of the important details in the Healthstream© module, and was placed in the designated notebooks on each unit that includes practice and

policy changes, equipment changes, etc. (Appendix L). Staff must read through these assigned activities and sign off that they received the information.

Attendance at each UBPC (4West, 4East, 3West, Family Center, ICU/PCU, ED) offered face to face discussion with unit staff and leaders. This allowed for any concerns or feedback to be brought up directly related to FPDR, explain what to expect in the Healthstream© module, as well as discuss the upcoming changes to the policy and answer any questions. Staff was very receptive during these meetings and were interested in learning more about FPDR as well as how to incorporate it into their practice if they haven't already. It was also helpful to hear from specialty units like the ED and Family Center about their specific policies – for example, it wasn't identified initially that there was a separate newborn and pediatric cardiac arrest record from the adult cardiac arrest record until a Clinical Practice Leader communicated this during our meeting.

Once the education module was assigned to staff identified as potential FSP, a resource binder was developed to distribute to the units that reiterated the training, as the module closed in Healthstream© 30 days after it was completed. This also was not a sustainable solution for freezing change since it is not practical to go back into the training system to refresh on the information when you are in the middle of a Code Blue with family members. It was essential to have an easily referenced and tangible resource for staff to utilize during these stressful and often frantic situations. A binder with the highlights of the slides from the training module, including the "*What to say*" section, as this is likely the most helpful resource for staff during actual resuscitation events, was placed at the nurse's station on each unit labeled "Family Presence During Resuscitation Toolkit" (Appendix M).

Finally, there will be coordination with Professional Development & Clinical Support at Exeter Hospital to incorporate FPDR scenarios during future scheduled monthly Mock codes on the units. This will provide staff with hands-on experience, role playing and interactive skills regarding FPDR after staff have completed the online educational modules, so that any perceived barriers to the practice will have been addressed.

Study of Interventions

The implementation of this project used the Plan, Do, Study, Act (PDSA) cycle to evaluate and refine the process. This included a pre- and post-intervention study and a retrospective chart review examining code sheet records to assess the prevalence of FPDR before and after implementation of the interventions. Previously, the documentation for the organizations Cardiac Arrest Record included a checkbox for "Family at Bedside" (Appendix C). This outcome was evaluated to determine if rates in the organization increased after development of a standardized policy, FSP role, and educational sessions. Exeter Hospital participates in Get with The Guidelines®- Resuscitation (GWTG-R), which collects resuscitation data from hospitals and utilizes this feedback as benchmarks to optimize outcomes (American Heart Association, 2022). With this data already being tracked, this process was utilized to obtain patients Medical Record Numbers (MRN) and dates/times of code in the organization to allow for review of Cardiac Arrest Records to obtain baseline data and tracking over time during the implementation period. and provide sufficient time for adequate resuscitation events to occur. Monthly, data trends will be reviewed, and adjustments to the interventions can be made for further process improvement.

Subsequently, to assess the effectiveness of the educational program, the Self-Knowledge Assessment (Appendix H) was administered both before and after the training module on

Healthstream©, and the results were reviewed to determine if knowledge scores increased after completion of the education. The same 10 questions were administered in the assessment pre and post assessment, and all correct and incorrect responses were recorded based on the answer key provided in the FPDR toolkit by Kantrowitz-Gordon et al. (2013). All responses remained anonymous and were not linked to individual participants, as the data was reported in aggregate. This data was collected over a 4-week period, to allow for initial assessment of the educational intervention, as this was piloted only to those in FSP role (Clinical Leaders, Clinical Practice Leaders, Clinical Nurse Practice Coordinators, Charge RN's, and Admission RN's). The percentages of correct and incorrect answers were reviewed for both the pre-test and the post-test to determine the changes in scores after the educational intervention. This knowledge assessment will be delivered again with the second round of education that will be open to all RNs on the aforementioned units, as well as RN's and leaders in other care environments in the hospital.

Measures

Prevalence of family presence was assessed before and during the interventions as outcome indicators. Through retrospective and current chart reviews, the number of patients who had family presence during resuscitation was identified, out of the total number of patients resuscitated from August 2019 -December 2022. This allowed for a comprehensive view of the average rates of codes in the institution, as well as a general rate of family presence. The terms "Family presence", "family members", and "resuscitation" are defined below explicitly to maintain consistency in data collection and context for inclusion in these measurements:

- "Family Presence" was defined as the presence of family member(s) allowed in the patient care area, in a location that provides visual or physical contact with the patient during resuscitation events (Eichhorn et al., 2001). If family members are unable to be

physically present during resuscitation efforts, such as visitor restrictions or geographical barriers, "Family Presence" may be defined as virtual using appropriate technology to allow as much inclusion in the process as possible.

- "Family members" was defined as people who have been identified as relatives or significant others, or support persons with whom the patient shared an established relationship (Eichhorn et al., 2001).
- "Resuscitation" was defined as the restoration of breathing, circulation, and normal heart rhythm with the use of chest compressions, medications, invasive procedure, and/or electrical shock (Emanuel-Hayes, 2018).

Exclusion criteria for these outcome measures included: patients with no means to have family available or present during resuscitation events, patients who have declined to family presence, or any events in which defined resuscitation measures do not take place. For the purposes of this data collection, the following locations in Exeter Hospital that are included in the "Code Blue PC-CODE.003" policy, in which resuscitation takes place and data was collected, comprised of: 1) patients admitted to any inpatient unit in the hospital, and 2) patients admitted to the Emergency Department.

Other operational definitions that were important to the outcomes measures include what personnel is part of the "Code Team" who fills out the Cardiac Arrest Record (Form #154), which in the PC-CODE.003 policy consists of a code leader (generally the Emergency Department (ED) Physician or Hospitalist), ED RN or Paramedic (ACLS provider), ICU RN (ACLS provider), Respiratory Care Practitioner, Pharmacist (when available), Clinical Resource Nurse (CRN) and Security. In the case of a pediatric or neonatal code, the team includes a Family Center (FC) RN (Pediatric Advanced Life Support (PALS) and/or Neonatal Resuscitation

Program (NRP) provider as appropriate. The Code Team responds to all "Code Blue" called within the hospital including inpatient and ED departments as outlined above, as well as other outpatient and procedural areas such as the Operating Room (OR) and Cardiac Catheterization Lab (CCL). Due to the nature of the sterile environments in these procedural areas, it was determined to not include the OR or CCL staff in the initial pilot of FPDR. These care areas present challenges to the practice, with research citing concerns of family presence affecting quality of care due to distractions during intricate procedures, and problems with maintaining sterile field (Balough-Mitchell, 2012). This is currently captured in the SOP in determining if the environment would be appropriate for family presence, and/or how to supplement FPDR if presence could not be physical due to sterility.

Further criteria included defining how to measure "Family Presence" during chart reviews. Only quantifying family presence using the "Family at Bedside" checkbox on the Cardiac Arrest Record would not include potentially all family presence, as these code sheets were not completed 100% of the time for every code. If the checkbox was not marked, the notes were reviewed for specific mention of family presence – either nursing notes or provider notes – and a combination of these criteria were used to determine overall FPDR rates.

Cost-Benefit Analysis

When discussing the context of implementing a standardized process for FPDR, it is critical to consider a Cost/Benefit analysis of this project. Financial costs to the organization for implementing educational sessions for staff would be no more than paid hourly wages for employees to complete the training. With the methods used – an online module and discussions at Unit-based Practice Councils – staff completed this training either while at work already during scheduled hours, or the employee was paid for the time as part of the Unit-based Practice

Council meetings. The modules were combined with annual competencies that staff needed to complete, and staff were already attending the council meetings, so no additional processes would need to be developed other than the curriculum for the training.

A consideration to allowing Family Presence During Resuscitation events are factors identified primarily during the COVID-19 pandemic, specifically during aerosol generating procedures (AGPs) – such as CPR, ventilation, and intubation procedures. During these high-risk AGPs, increased levels of personal protective equipment is required, and respiratory protective equipment should be donned. The Centers for Disease Control and Prevention (CDC) recommend using disposable masks/respirators (including N95 masks), powered air-purifying respirators (PAPR), or controlled air-purifying respirators (CAPR) in these situations (Howard, 2020). To allow FPDR and ensure family-centered care, these options should be offered to support persons during resuscitation events. Personal Protective Equipment needed for COVID patients is defined as: Gloves, Droplet mask/N95, Face shield, and Gown (Exeter Hospital, 2020). Outlined in PC-CODE.003-SOP.002 "Family Presence During Resuscitation Events", it explains that family present during resuscitation events shall use isolation precaution attire/equipment as required (Appendix G). With this in mind, there could be a slight cost to the care unit to provide N95 masks to family for patients who have a contagious respiratory illness. Each unit stocks their own 3M Aura 1870+ N95 masks, which are wrapped and charged individually, with a cost of $6.90 per mask. This would be a minimal increase to the unit budgets, as the average number of codes per month is about 5, and the average total number of codes over the last 3 years was 63, giving a potential cost to units throughout the hospital of $434.70 annually (Table 1). A cost this high is unlikely however, as family presence would not be expected with every single code, and N95 masks are now only required for COVID+ patients

or during a “Level 4 – High Risk: Widespread risk or communicable disease spread with increasing morbidity and mortality” visitation level (Exeter Hospital, 2023).

Table 1.

	Average codes	Cost to unit
N95 mask		$6.90/mask
Per month	5	5 x $6.90 = $34.5
Per year	63	63 x $6.90 = $434.7

In another context, it is important to weigh the risks – or *costs* in this sense – and benefits overall to the organization related to offering FPDR, especially when deliberating patient and family-centered care and ethical principles. Benefits relative to organizational costs include providing family-centered care which is strongly correlated to increased patient satisfaction scores (Balogh-Mitchell, 2012). Providing the option for family presence aligns with the principle of autonomy and allows for empowerment of both the patient and family members to make these important decisions rather than healthcare providers (Oczkowski et al., 2015). Furthermore, studies find that patient care disruptions are rare, and do not affect outcomes during resuscitation events (AACN, 2010). Research indicates that patients would want their family members present during resuscitation and family members would want to be present, with the benefit of closure in their presence far outweighing the risk of adverse psychological effects among family members remain at the bedside (Balogh-Mitchell, 2012).

Analysis

Retrospective data was initially reviewed to obtain baseline performance data on the current prevalence of FPDR throughout the organization. It was determined that code data from the last 3 years would be relevant, since the COVID-19 pandemic had likely affected family presence availability with the widely imposed and frequently changing visitation guidelines. 6

months of code data pre-pandemic was reviewed as well to observe more traditional patterns prior to these massive changes. Descriptive statistics were used to compare EMR data before and during the interventions implemented to determine how FPDR has changed over time.

The sample size for retrospective code data was fairly limited, as this took place at a 100-bed community hospital New Hampshire, which has a conventionally low number of codes and resuscitation events per month. Data was collected from medical record reviews of patients who were admitted and had experienced a cardiac arrest in the hospital – either in the emergency department or in other inpatient units. Using patients medical record number (MRN) and confirming visit number (V#) from the quality data pulled from Get with The Guidelines®-Resuscitation, cardiac arrest records were reviewed for family presence. Notes were also reviewed to determine if family presence was documented elsewhere. Data that was kept was the date of code, location of code, and if family presence was documented. Quantitative data was then compared for mean, frequencies, and percentages over time in each category. Quantitative data was also collected from the pre and post Self-Knowledge Assessment with the education module. These scores were analyzed descriptively, and proportions were compared between the two groups to determine change in knowledge scores before and after the intervention.

Ethical Considerations

The argument for family presence during resuscitation is an ethical dilemma, hence the controversy that still surrounds it, regardless of the supporting evidence. When it comes to inviting families to witness the resuscitation of a loved one, Twibell (2018) asks, “Whose needs, priorities, and wishes are most important?” (p. 40). It is not an easy decision; however, nurses and providers perceive an ethical duty to save a patient’s life, and they do their best to prevent anything from doing so, which may at times include restricting family presence (Twibell, 2018).

Bias presented a risk for this study, as some healthcare providers may be against the promotion of FPDR, thereby not offering the opportunity to patients and family. This was addressed by providing educational sessions to staff teaching what FPDR entails and offering time to reflect on potential biases and preconceptions. Brasel et al. (2017) explains that risks during codes and resuscitation are accepted and expected by healthcare providers, but family members have not been adequately informed of these potential hazards and may not have the basic awareness to protect themselves in these dangerous situations. Family members need to be briefed by the FSP on situations in this environment where potential risks are present.

The project received confirmation by the hospital's Clinical Research Council that it did not involve human research and therefore was not required to obtain organizational IRB approval as a quality improvement initiative. Prior to reviewing Electronic Medical Records (EMR) to collect family presence data, approval was obtained by the hospital's privacy and compliance officer. There was no collection or storage of Personal Health Information (PHI), only code dates, location and family presence were captured, so no further authorization was needed. A consent statement was presented to participants prior to beginning the education module, explaining their involvement in a quality improvement project to which they could refuse to answer any questions or stop at any time. The pre and post test results had no influence on participants employment in any way, and all survey results of knowledge assessment data were strictly voluntary. Due to a small sample size in the chart reviews, there is a risk of individual patients to be identified, and consequently all patient identifiers were removed from the data analyzed in this study. An even smaller sample size was present for staff completing the knowledge assessment; thus, no participant identifiers were collected with the data. In summary, when advocating for our patients, any of these ethical dilemmas can arise for the healthcare

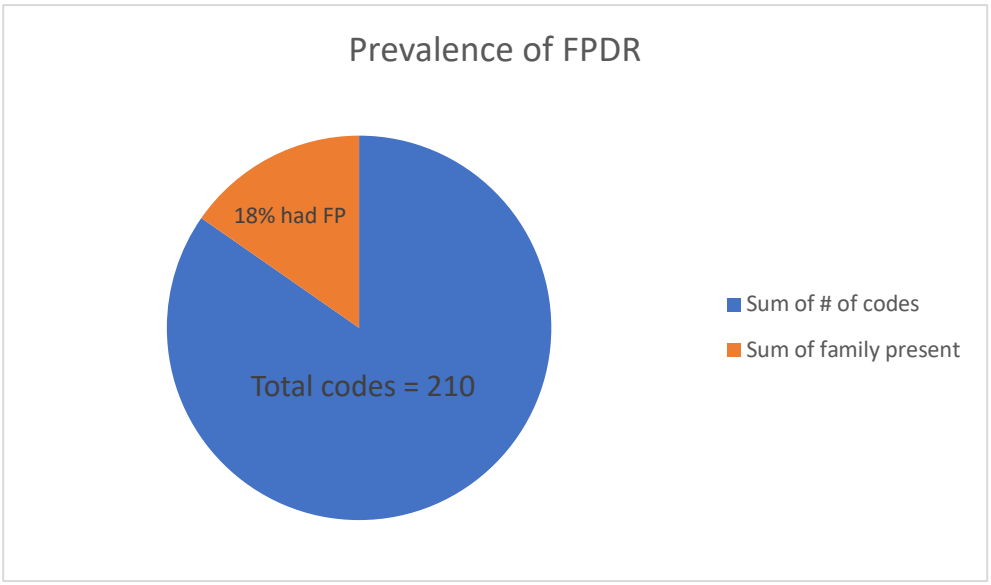
provider, and having a standardized process and policy outlining and promoting FPDR in the institution can work to relieve this burden.

Results

A total of 210 codes were examined taking place at Exeter Hospital between August 2019 and December 2022, with an average number of codes being 61.4 annually. Out of the 210 codes that took place in both the ED and Inpatient areas, only 38 codes had Family Presence (Figure 4). Prior to the pandemic, in 2019, the total number of codes tracked was 21, the highest number of codes per month was 7 (months October and December) with an average of 4.2 codes overall from August – December. There were 8 codes (38%) that included FP, with only one code allowing FP in the inpatient care area, and the remaining 7 codes in the ED.

Figure 4.

Prevalence of FPDR from August 2019- December 2022

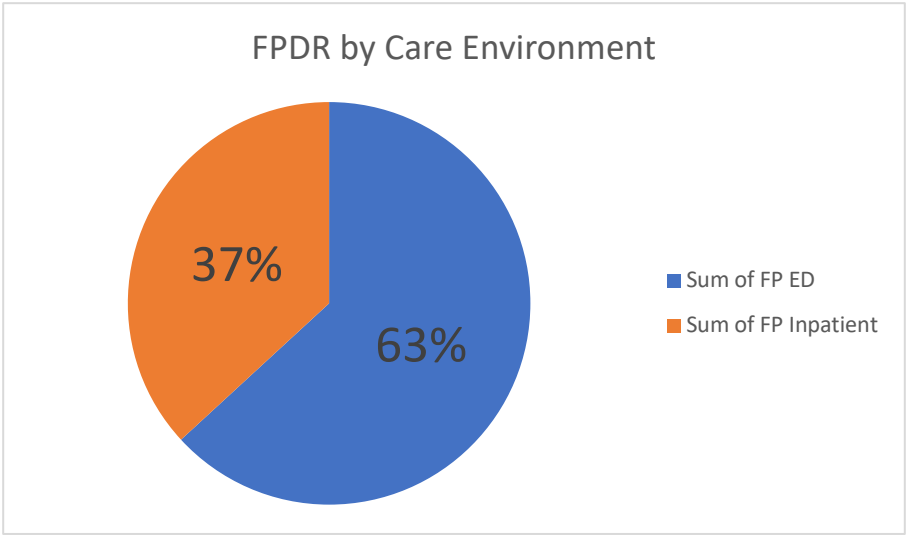


In 2020, there were a total of 57 codes from January – December, with an average of 4.75 per month, and the highest number of codes per month at 11 in September. Out of the 51 codes total, only 7 of them had FP (13%). The ED had 3 codes with FP and inpatient areas had 4. The

following year, 2021, had the highest number of codes to date at 68 total. The average number of codes per month increased to 5.67, with the highest being 9 (January, May, and October). Of the 68 codes total codes that year, 13 had FP (19%). A larger number of FP during codes took place in the ED with 8 out of 13, and 5 codes with FP inpatient. Finally in 2022, there were 64 total codes, with an average of 5.33 per month, the highest being 9 in August. The number of codes with FP was 10 (16%), and again the majority of the FP took place in the ED over inpatient areas 6 out of 10 versus 4 out of 10 took place inpatient. A comprehensive review of these categories shows that 63% of the codes in which family presence took place occurred in the emergency department, and 37% took place inpatient (Figure 5).

Figure 5.

Prevalence of FPDR in Emergency Department vs. Inpatient



During the study timeframe, there were frequent changes in visitation policies in response to the COVID-19 pandemic. Per the hospital's standard operating procedure (RI).001-SOP.001, the extent to which limitations or restrictions are placed on visitation is based on the level of community risk and is generally defined according to the following levels (Exeter Hospital, 2023):

- LEVEL 1 – No Health or Safety Risk: There is no risk to health or safety present. Visitors are allowed without restriction.
- LEVEL 2 - Low or Emerging Risk: Low communicable disease activity or other risk with little to no patterns or clusters. No visitors under the age of 18 and there may be limitations regarding the number of visitors allowed.
- LEVEL 3 – Moderate Risk: Patterns of risk have been detected including communicable disease clusters, regional outbreaks or increasing disease activity. Inpatients may have one designated visitor each day and visitation will be limited to one to two hour per day.
- LEVEL 4 – High Risk: Widespread risk or communicable disease spread with increasing morbidity and mortality. No visitors are allowed, but exceptions will be considered for patients at end of life or laboring and pediatric patients.

Prior to the pandemic, visitation policies were considered "Level 1" with no restrictions in place (Figure 6). In March of 2020 however, the hospital implemented Level 4 due to the high-risk nature of the evolving pandemic, and all visitation was abruptly halted. This is evident in the code data (Figure 7) which shows no family presence March-May when these restrictions were first implemented. The rest of the year had sporadic FP as visitation policies frequently changed between levels 3 and 4, noting that even the highest risk category allowed exceptions to this rule. The year 2021 was more consistent, with only the months April, June, and November without any FPDR (Figure 8). Unfortunately, 2022 saw a decrease in FP again, and this is when visitor restrictions were at their lowest (Figure 9).

Figure 6.

2019 Family Presence Code Data with Visitation Levels

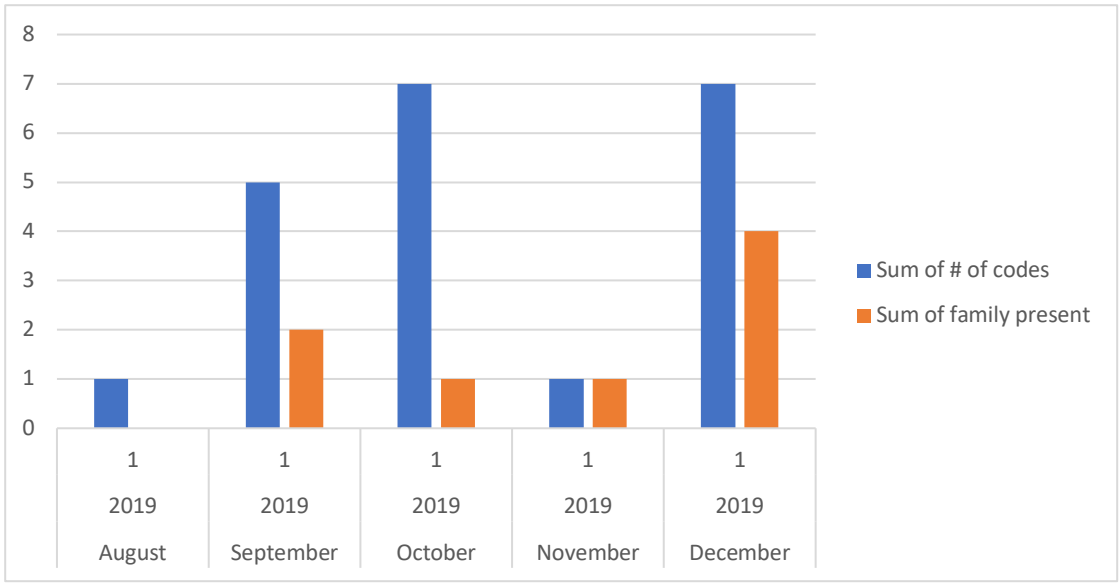


Figure 7.

2020 Family Presence Code Data with Visitation Levels

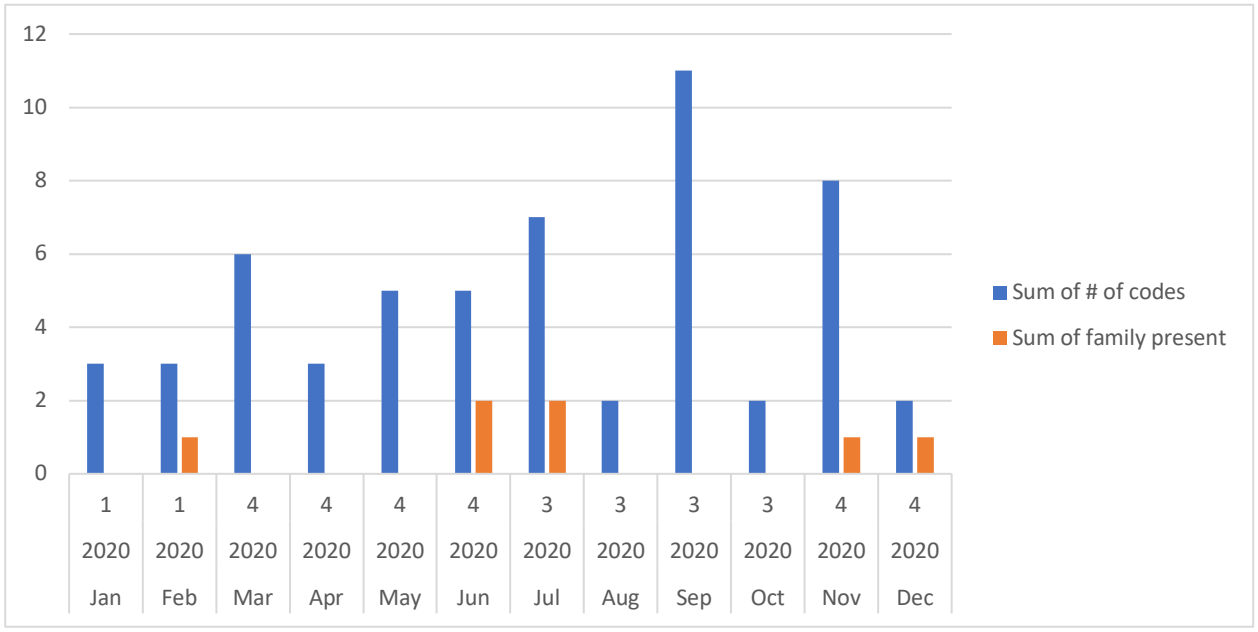


Figure 8.

2021 Family Presence Code Data with Visitation Levels

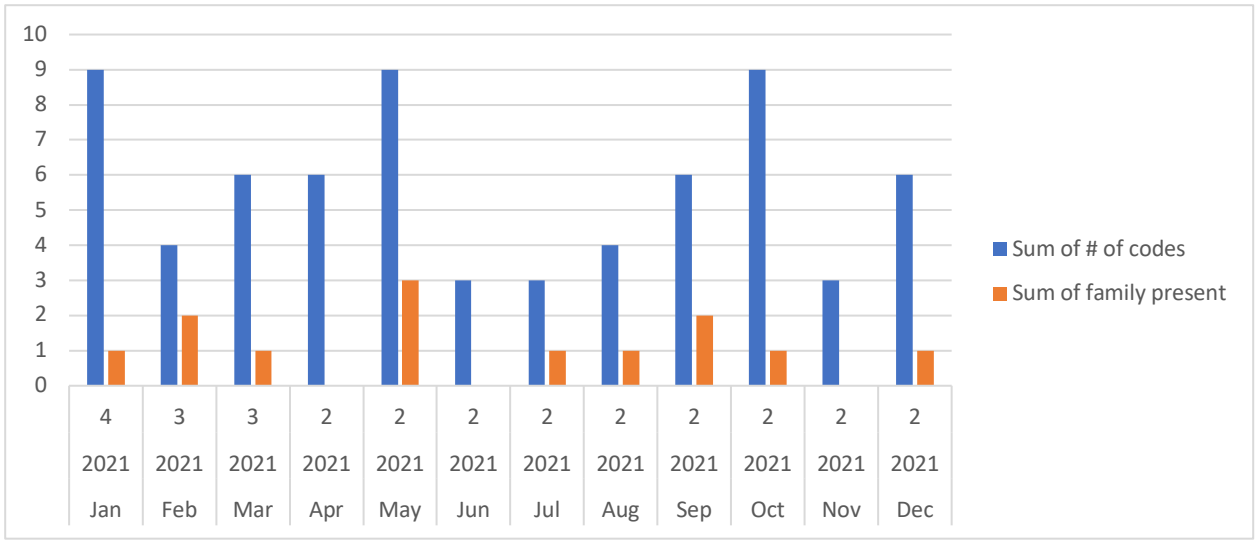
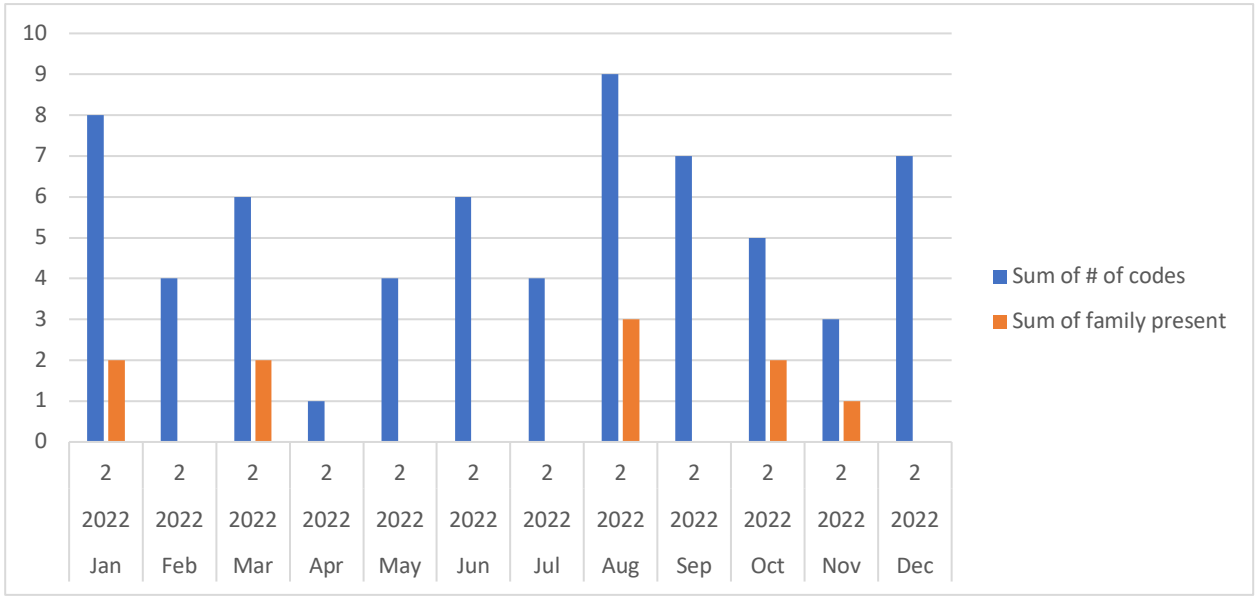


Figure 9.

2022 Family Presence Code Data with Visitation Levels



An initial goal in the proposal of this project was to determine if prevalence rates of FPDR increased in the hospital by 15% after implementing the interventions, and if not, adjustments will be made in congruence with the PDSA cycle (Institute for Healthcare Improvement, 2022). Unfortunately, due to timing of the project roll out, and validation of code data by CMS, it was not possible to review the intended 12 weeks of data from January through

March to observe FPDR prevalence after implementation of the interventions, however, this will be included in future recommendations.

The results of the pre/post knowledge assessment were evaluated to determine the impact of the education module. The assessment was assigned to 61 nurses total – all in the designated FSP role – for this pilot. It had an excellent response rate, with 51 nurses (84%) completing the assessment and 10 nurses completing the module but voluntarily declining the assessment. The 10 true/false questions were compared to the answer key provided in the toolkit by Kantrowitz-Gordon et al. (2013) and changes in knowledge scores were assessed (Table 1). Correct answers to the assessment included 1, 4, 10 as "False" and 2, 3, 5, 6, 7, 8, 9 as "True" (Appendix H). In compliance with hospital procedure for voluntary surveys assigned to employees, each answer of the assessment had a "I choose not to answer" option, allowing for participants to opt out at any time. This response if chosen, which was rare, was coded as an "incorrect" answer.

Table 2.

Self-Knowledge Assessment Pre/Post Aggregate Data

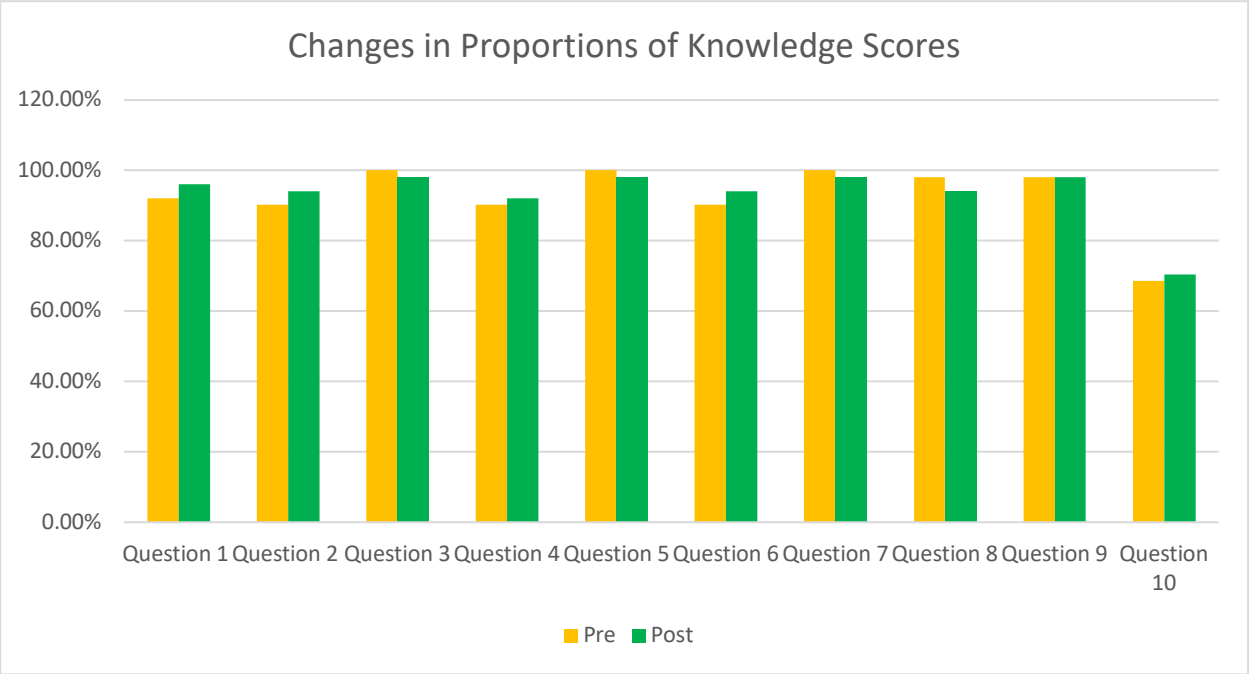
Question	ANSWER	Pre	Post
1. Family Presence During Resuscitation (FPDR) is too traumatic for family members to witness.	True	4	2
	False	47	49
2. FPDR provides additional support and comfort for the patient.	True	46	48
	False	5	3
3. FPDR provides assurance for the family members that everything possible has been done for the patient.	True	51	50
	False	0	1
4. Studies have shown that family members tend to become disruptive and extremely emotional when present during CPR.	True	5	4
	False	46	47
5. Provision of a family support person to be with the family during the resuscitation is part of the recommendations for FPDR policies.	True	51	50
	False	0	1
6. Excluding family members from the patient's bedside during CPR is inconsistent with a family-centered model of care.	True	46	48
	False	5	3

7. FPDR facilitates a sense of closure and initiation of the grief process in cases where death occurs.	True	51	50
	False	0	1
8. Many family members would opt for family presence again.	True	50	48
	False	1	3
9. Numerous nursing and medical professional organizations have published guidelines supporting the option of FPDR.	True	50	50
	False	1	1
10. FPDR should only occur if all members of the resuscitation team are comfortable having a family member present.	True	16	15
	False	35	36

The knowledge score proportions were slightly higher after the intervention than before the intervention (Figure 10). There were 5 questions in which the post-test results yielded higher percentages (Questions 1, 2, 3, 5, 10), and 1 question in which the post-test result was equal to the pre-test (Question 9). Conversely, there were 4 questions in which the pre-test results were higher than the post-test (Questions 3, 5, 7, 8). Overall, the correct responses were high, with all but one question generating 90% or above of the participants that answered correctly. The lowest scoring answer was question 10 (70.5%), which read "FPDR should only occur if all members of the resuscitation team are comfortable having a family member present".

Figure 10.

Changes In Proportion of Correct Responses to FPDR Knowledge True/False Questions



Quantitative data from the pre and post Self-Knowledge Assessment during education sessions was compared using proportions from aggregate results obtained from the data sets. Missing data were handled by pairwise deletion. Qualitative data was not able to be obtained during this project, however, several nurses additionally reached out with unsolicited feedback that was favorable and appreciative of the information and content. A nurse also anecdotally reported after completing the education module they pushed for a provider to allow FPDR during a code in the Intensive Care Unit (ICU), and the family was incredibly grateful they were given this experience; these comments were an unexpected benefit to the project.

Discussion

Summary

Family presence during resuscitation is an important part of patient and family-centered care, and education surrounding this topic is imperative, as it remains a controversial and under-utilized practice among nurses and healthcare providers. The benefits of this practice are vast; and to truly implement shared decision making, nurses and providers must respect patient's and

family's wishes and encourage them to participate in care when appropriate; even during acute crises like resuscitation events. It is clear in the literature that more education on FPDR is needed to increase prevalence of this practice and increase utilization. It is also clear that formal policies need to be in place for successful integration of this practice. Evidence continues to demonstrate that the benefits outweigh any perceived risks of FPDR, therefore it is vital to explore new ways to improve FPDR practice and provide support to staff (Powers, 2017).

This quality improvement project intended to provide a consistent approach to increasing promotion of Family Presence During Resuscitation. To accomplish this aim - development of policies and procedures, staff education, and quantitative data collection were comprehensively designed. Key findings from the electronic medical record review revealed that the hospital practices FPDR, but the opportunity to increase this practice exists. The results of the EMR and code data were intriguing to review, especially taking place primarily during a pandemic. Reviewing the results from the knowledge assessment from Registered Nurse's in lateral leadership on inpatient units and in the Emergency Department show that there is a decent baseline knowledge of FPDR, however, the opportunity to increase this knowledge endures, and some common misconceptions remain.

A particular strength of this project was standardizing how FPDR is discussed, offered, allowed, and documented with the use of organizational policies, standard operating procedures, and forms. Another strength is providing uniform staff education to all FSP in the hospital and increasing overall staff awareness about the importance and benefits of FPDR. This toolkit provided staff with a structured opportunity to consider the presence of family members at resuscitation so they can be well-informed when encountering this situation in clinical practice.

Interpretation

Associations between the various interventions and outcomes of this project were largely influenced by the global pandemic that took place entirely during data collection and implementation. Previous advances and the growing evidence supporting the emotional and psychological benefits of FPDR ultimately dissolved during the worldwide response to COVID-19. Out of an abundance of caution, widespread restrictions or even complete bans on family presence have been implemented in many care settings. This unfortunately caused many negative unintended consequences and did not well preserve family engagement strategies (Frampton et al., 2020). Clearly, the frequently changing visitor restrictions in the organization played a role in the offering/allowing of FPDR, as well as the consistency of the practice.

Nurses have worked tirelessly over the last 3 years to continue to provide the best care for their patients, all with the immense stress on our healthcare delivery system that was not positioned well to find a balance between limiting community risk and spread and supporting the need for familial support (Frampton et al., 2020). During electronic medical record reviews, there were often code sheets not documented, so potential FP could not be accounted for. There were also code sheets that did not have "Family Present at Bedside" checked off, but it is unclear if FP did not actually occur, or simply the box did not get checked.

This project was able to be compared to previous findings on the subject, utilizing the same toolkit and self-assessment to draw conclusions about nurses' knowledge levels before and after FPDR education (Kantrowitz-Gordon et al., 2013). In the original study, knowledge scores were significantly higher after the intervention than before the intervention, with the proportion of participants with correct responses to each true–false question significantly increased after the educational intervention. This study commissioned many participants however (n=271), and focused on nursing students, rather than registered nurses, so the knowledge gap was potentially

greater in that population. Other studies in the literature have suggested that when health care professionals gain knowledge and experience with FPDR, they exhibit a more positive view on the subject, and institution policies that promote FPDR as a standard of care were more likely to have this practice embraced by staff (Kantrowitz-Gordon et al., 2013). Thus, integrating FPDR concepts into standard training for health care professionals may serve as a mechanism for more widespread adoption of this family-centered care practice.

Limitations

Due to time constraints of this project, a limiting factor was that review of the post implementation data to determine changes in FPDR rates was not feasible. The organizational process of getting a quality improvement project approved, developing new policies, getting buy-in and support from committees and leadership, and finally rolling out education to staff took a substantial amount of time, thereby postponing the successive data collection of code data from January-March 2023. Further, it would be beneficial to observe code data using the updated Cardiac Arrest Records, as this form was updated to be a clearer statement of FPDR being an institutional expectation that should be facilitated, when at all possible, versus just a potential option for those who might know what it is. Utilizing the PDSA cycle, the next step of this project should include the post implementation EMR review, and subsequently modify the Code Blue Policy, FPDR SOP, or Cardiac Arrest Records to better reflect a more realistic representation of FPDR rates in the facility.

Another limitation to this project was that only aggregate data was able to be extracted from the Healthstream© education module, as opposed to individual participant results, resulting in the inability to draw conclusions about independent variables. The original proposal intended the data to be analyzed using Chi-square and paired t-test to determine change in knowledge

scores between groups before and after the intervention. Unfortunately, the design of the pre and post assessment only allowed aggregate information to be pulled from the data set, and participants were not able to be distinguished and determine individual scores to complete a paired t-test. The construction of the module was unknowingly set up as a "survey" rather than a "test" and due to this setting, there was no way to view the individual pre and post test results. This led to generalized inferences about the results that could not be measured for statistical significance. Again, in the future PDSA cycle it would be prudent to ensure the module is set to "test" mode to collect this more detailed evidence. Another factor in the education module was the lack of qualitative data, which could have added to a more robust view on staff RN's perceptions and confidence surrounding FPDR. This was included in the PowerPoint slides of the education component, however, due to a challenge with the formation of the module there were no spaces for participants to write in their responses for qualitative data collection, only allowing time for self-reflection. In future models, both quantitative and qualitative methods would be highlighted.

Further limitations with the education module for staff was that the roll out of the training was added to the RN annual competencies that need to be completed by the end of the year. This likely added to stress on the nurses who already had many other skills signoffs and education to complete during this time, and could have been prioritized for a later date, given its voluntary nature. The initial goal was to have the policy, SOP, and Cardiac Arrest Records launched at the same time as the training to allow for staff to have the changes fresh in their mind, however there were other code cart changes and updates coming out at this time, and it was determined this could be overwhelming to staff. Further, the staff that were being educated during this initial pilot for the FSP role were considered experts in their field based on their position (Clinical

Leaders, Clinical Practice Leaders, Clinical Practice Nurse Coordinators, etc.) so it was likely that these nurses have a fair amount of knowledge on FDPR already, resulting in minimal changes in pre/post test results. This could be reevaluated when the education is debuted to all RNs in inpatient or ED of the hospital who might not have the higher level of experience or understanding of this practice.

Lastly, a limitation and deviation from the original proposal was the lack of simulation in the staff education. It was suggested to include simulating FPDR during the organizations mock codes that are performed on a monthly basis, however, given multiple factors related to the pandemic state, this was postponed. Regrettably, the lack of staff in the education department related to deployment to priority units during this time, and request from unit managers to reduce this practice until admissions and hospital staffing stabilizes, monthly mock codes did not occur during this project timeline. It is still recommended based on the evidence in the literature that simulation-based experiences may offer a strategy to address barriers to offering FPDR, to close the practice gap and ultimately improve outcomes (Schafer & Kremer, 2022).

Conclusions

The presence of families during cardiopulmonary resuscitation has been exhaustingly proven to be a safe and beneficial custom for patients, their loved ones, and clinicians. Success of this practice does rely, however, on the development and standardization of distinct family support roles and policies. There may be circumstances in which FPDR could not be safe or beneficial, and it takes a trained FSP with support from leadership and hospital guidelines to determine how to handle this situation. To help nurses provide best care for patients and families during emergencies such as resuscitation, FPDR education is recommended for not just nurses, but all healthcare providers regardless of experience or specialty. Extending teaching to include

other types of clinicians - such as social work, chaplains, and nursing assistants - is vital, as the healthcare team is interdisciplinary, and best outcomes would require buy in from all associated members (Powers, 2017). Further research would be essential in determining the best approach to these educational interventions, including standardized guidelines on what material is covered and the preferred delivery method for staff.

The education provided to staff during this project was essential in moving the needle towards FPDR as a standard practice. Yet, one training session alone will not sustainably transform practice, so it is important to continuing this training annually as part of RN competencies. Additionally, ongoing educational strategies such as posters or flyers on the units, updates sent out in monthly staff communications or inclusion in team-based dashboards and huddles, and incorporating into monthly mock code simulations are important reinforcement for lasting change (Mian et al., 2007). Much of the literature on FPDR focuses on critical care environments, but is limited in the medical-surgical setting, and indicates that FPDR is not commonly practiced by medical–surgical nurses (Powers & Reeve, 2020). Simulation can provide members of the healthcare team who work in areas where cardiac arrest and resuscitation methods are less common with exposure to these potentially low-frequency events to increase knowledge and confidence.

The lack of family contribution to policies and practices related to FPDR is a notable gap in the existing literature (Shafer & Kremer, 2022). A future recommendation to expand on this initiative would be to incorporate Experience Based Co-Design (EBCD) - a method used frequently in Europe and has been recently brought over to the U.S. for involving patients and family members in improving or redesigning healthcare services (Raynor et al., 2020). This process utilizes both staff and patient/family focus groups to design policies and interventions

together based on their determined priorities. This method is unique, as it frequently finds that the interventions and priorities identified by patients/families are different than what staff consider important. When developing guidelines around shared decision-making, healthcare teams may be blind to what patients and families might identify as important areas to improve and could shed a whole new light on priorities during resuscitation events. The EBCD process was already outlined in early phases of this quality improvement project with the organizations Patient Experience Council, as well as the director of New Hampshire's Foundation for Healthy Communities, so would be an easy transition to add this process to the next FPDR implementation phase. Using the trajectory of this project, patients and health-care professionals can work together to identify and implement changes that benefit the entire healthcare team resulting in enhanced communication, mutual learning and respect, and improved outcomes.

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Appendix A.

Previous Exeter Hospital Policy PC-CODE.003 active 2018-2022

P	EXETER HOSPITAL, INC. POLICY	POLICY #: PC-CODE.003	PAGE: 4 of 7
		EFFECTIVE DATE: 10/2018	

TITLE: Code Blue

SUPPORT RESPONDERS (Outside Room)	ACTIONS
Unit Coordinator (UC)	1. Bring patient chart to room. 2. Obtain needed supplies. 3. Collaborate with clinical manager/CRN to determine notification of Hospital Spiritual Care Advisor or Social Work, or Victim's Inc. (after business hours) for support of family and staff. 4. Direct responders to the patient care area.
LNA	1. Perform CPR if initial responder. 2. Remove extra furniture from room and escort roommate if possible out of the immediate area. 3. Obtain needed supplies. 4. Care for other patients on the unit.
Security	1. Obtain equipment as needed. 2. Access elevators and facilitate transport as needed 3. .Crowd Control
Clinical Manager/Charge Nurse/Clinical Leader/Clinical Resource Nurse (CRN)	1. Assure adequate response. Facilitate supportive care from Hospital Spiritual Care Advisor or Social Work, or Victim's Inc. as appropriate. 2. Minimize crowding. 3. Attend to family members if present. 4. Coordinate/facilitate bed placement. 5. Coordinate care of other patients. 6. Facilitate debriefing with Code Leader as indicated.

Appendix B.

Current Exeter Hospital Code Blue Policy PC-CODE.003 active 2022-Present

P	EXETER HOSPITAL, INC. POLICY	POLICY #: PC-CODE.003	PAGE: 4 of 8
		EFFECTIVE DATE: 10/2022	

TITLE: Code Blue

SUPPORT RESPONDERS (Outside Room)	ACTIONS
Unit Coordinator (UC)	1. Bring patient chart to room and obtain needed supplies. 2. Collaborate with clinical manager/CRN to determine notification of Hospital Spiritual Care Advisor or Social Work, or Victim's Inc. (after business hours) for support of family and staff. 3. Direct responders to the patient care area.
LNA	1. Perform CPR if initial responder. 2. Remove extra furniture from room and escort roommate, if possible, out of the immediate area. 3. Obtain needed supplies. 4. Care for other patients on the unit.
Security	1. Obtain equipment as needed. 2. Access elevators and facilitate transport as needed. 3. Perform crowd control.
Clinical Manager/Charge Nurse/Clinical Leader/Clinical Resource Nurse (CRN)	1. Assure adequate response. 2. Minimize crowding. 3. Coordinate/Facilitate bed placement. 4. Coordinate care of other patients. 5. Facilitate debriefing with Code Leader as indicated.
Family Support Provider	1. Attend to family members if present. 2. Facilitate supportive care per PC-CODE.003-SOP.002.

Appendix C.

Exeter Hospital Form #154 – Cardiac Arrest Record active 2018-2021

EXETER HOSPITAL
5 Alumni Drive Exeter, NH 03833 603.778.7311

Cardiac Arrest Record – Adult

Fax to Pharmacy
603.580.6645

PATIENT ID OR LABEL

Page 2 of 2

PREHOSPITAL REPORT (ED ONLY):
Precipitating event:_____ Past medical hx:_____
IV/IO location:_____ Allergies:_____
Routine Medications:_____

CIRCULATION	AIRWAY/BREATHING
1st Rhythm requiring compressions:_____ 1st Pulseless rhythm:_____	☐ BVM ☐ ETT ☐ Blind Insertion Airway ☐ LMA ☐ Other ____ Intubation Size: ____ Time: _____ Taped at:_____
Time chest compressions started:_____ Ext Pacer On? ☐ Yes ☐ No	Confirmation: ☐ Visualization ☐ ETCO2 Capnography ☐ ETCO2 Colorimetric ☐ Other:___
Medications used: Epinephrine: # of doses given _____ Amiodarone: Dose_____	Other information:

Location:_____ **Date and time event recognized (in unit):**_____
Event witnessed (in hospital)? ☐ Yes ☐ No **Hospital or unit-wide emergency response activated?** ☐ Yes ☐ No ☐ Family at Bedside

MONITORING AT ONSET:
☐ ECG
☐ Pulse Ox
☐ Apnea
AED On? ☐ Yes ☐ No
Ext Pacer On? ☐ Yes ☐ No

BREATHING AT ONSET:
☐ Spontaneous
☐ Assisted
☐ Agonal
☐ Apnea
☐ Intubated

RHYTHM AT ONSET:
☐ VF
☐ Pulseless VT
☐ PEA
☐ Asystole
☐ Bradycardia
☐ Sinus
☐ SVT
☐ Paced
☐ Other _____

CIRCULATION:
1st Rhythm requiring compressions:_____
1st Pulseless rhythm:_____
Date/Time:_____
Time/date chest compressions started:_____

AIRWAY/BREATHING:
☐ BVM
☐ ETT
☐ LMA
☐ Other_____
Time:_____
Intubation/Reinserted:
Time: _____
Size: _____
Whom:_____

Confirmation:
☐ Visualization (Laryngoscope)
☐ ETCO2 Capnography
☐ ETCO2 Capnometry
☐ ETCO2 Colorimetric
☐ Other

CPR QUALITY
☐ Waveform capnography
☐ Arterial Waveform/Diastolic Pressure
☐ CPR Mechanics Device
☐ CPR Quality Coach

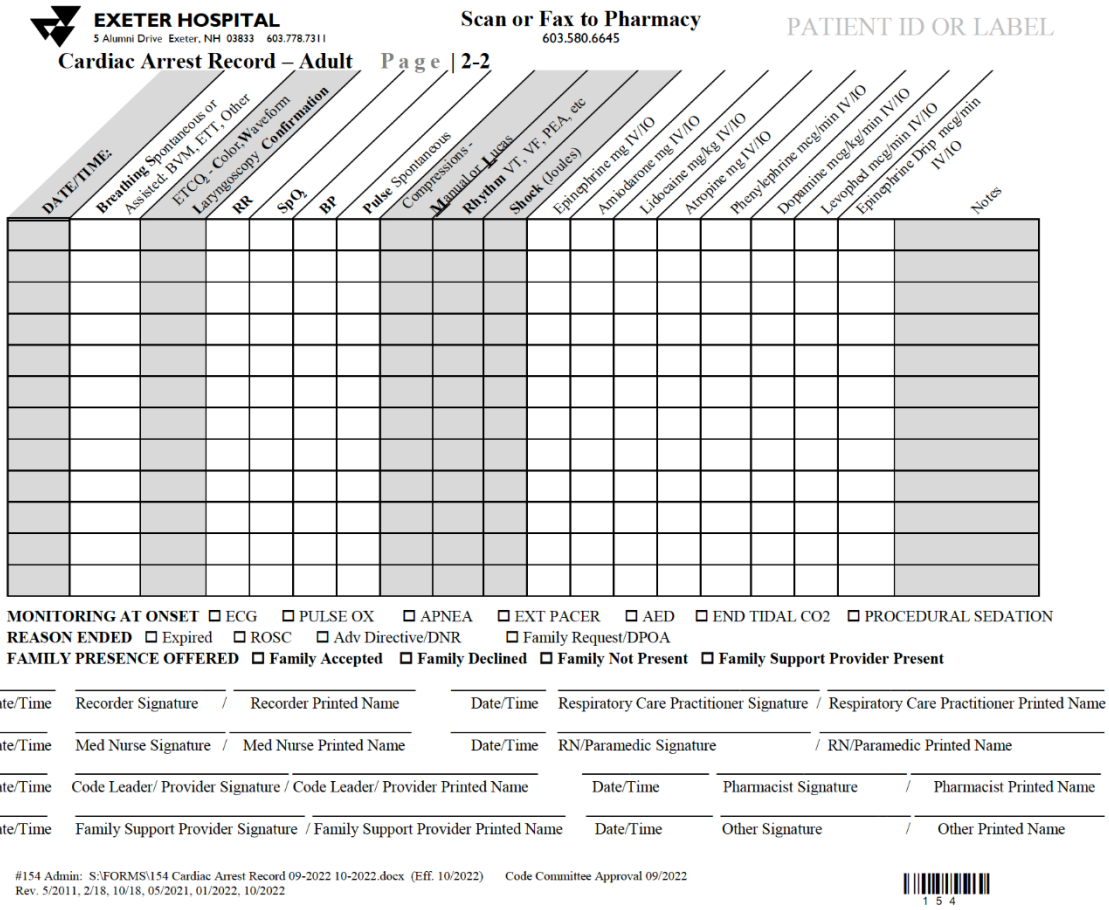
REASON ENDED:
☐ ROSC
☐ Adv Directive/DNR
☐ Family Request/DPOA
☐ Expired/No ROSC

#154 Admin: S:\FORMS\154 Cardiac Arrest Record 10-2018.docx (10/2018)
Rev. 5/2011, 2/18, 10/18

1 5 4

Appendix D.

Exeter Hospital Form #154 – Cardiac Arrest Record active 2022-present



EXETER HOSPITAL
5 Alumni Drive Exeter, NH 03833 603.778.7311

Scan or Fax to Pharmacy
603.580.6645

PATIENT ID OR LABEL

Cardiac Arrest Record – Adult Page | 2-2

DATE/TIME:	**B**reathing Spontaneous or Assisted: BVM, ETT, Other	$ETCO_2$ - Color/**W**aveform **L**aryngoscopy **C**onfirmation	**RR**	SpO_2	**BP**	**P**ulse Spontaneous	Compressions - **M**anual or **L**ucas	**R**hythm VT, VF, PEA, etc	**S**hock (joules)	Epinephrine mg IV/IO	Amiodarone mg IV/IO	Lidocaine mg/kg IV/IO	Atropine mg IV/IO	Phenylephrine mcg/min IV/IO	Dopamine mcg/kg/min IV/IO	Levophed mcg/min IV/IO	Epinephrine Drip mcg/min IV/IO	Notes

MONITORING AT ONSET ☐ ECG ☐ PULSE OX ☐ APNEA ☐ EXT PACER ☐ AED ☐ END TIDAL CO2 ☐ PROCEDURAL SEDATION
REASON ENDED ☐ Expired ☐ ROSC ☐ Adv Directive/DNR ☐ Family Request/DPOA
FAMILY PRESENCE OFFERED ☐ **Family Accepted** ☐ **Family Declined** ☐ **Family Not Present** ☐ **Family Support Provider Present**

Date/Time Recorder Signature / Recorder Printed Name Date/Time Respiratory Care Practitioner Signature / Respiratory Care Practitioner Printed Name

Date/Time Med Nurse Signature / Med Nurse Printed Name Date/Time RN/Paramedic Signature / RN/Paramedic Printed Name

Date/Time Code Leader/ Provider Signature / Code Leader/ Provider Printed Name Date/Time Pharmacist Signature / Pharmacist Printed Name

Date/Time Family Support Provider Signature / Family Support Provider Printed Name Date/Time Other Signature / Other Printed Name

#154 Admin: S:\FORMS\154 Cardiac Arrest Record 09-2022 10-2022.docx (Eff. 10/2022) Code Committee Approval 09/2022
Rev. 5/2011, 2/18, 10/18, 05/2021, 01/2022, 10/2022

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Appendix E.

Exeter Hospital Form #1093 – Newborn Stabilization Flowsheet/Cardiac Arrest Record

EXETER HOSPITAL
5 Alumni Drive Exeter, NH 03833 603.778.7311

Fax to Pharmacy
603.580.6645

PATIENT ID OR LABEL

Newborn Stabilization Flowsheet/ Cardiac Arrest Record Newborn Page 1 of 2

Date/Time Event Recognized:_____
Location: ☐Delivery Room ☐Nursery ☐ED ☐OR
☐Other_____ **GA**_____
Apgar Score____/____/____/____
SGA LGA AGA **Feeding** _____
Weight: ☐ Grams_____ Lbs./Ounces _____
Length_____ HC_____ Band # _____

Delivery Complications:

Delivering Patient Name:_____ **Delivering Patient MR#:**_____

G____ **P**____ **L**____ **EDC**_____ **Blood Type** ____ **AB** _____ **Rubella**____ **HIV** ___
Hep B ___**Hep C** ___**Varicella** _____ **STD**_____ **Covid** _____
GBS ____ **RX # of doses**_____ **Antibiotic type**_____

Date of birth_____ **Time of birth**_____ **Vag** ☐ **Vac assist** ☐ **C/S** ☐ **Anesthesia**_____

Induced ☐

Maternal Risk Factors:

Highest Maternal Temp _____
Rom duration _____

Time Event Ended: _____

☐Stabilized/Remains on unit
☐Transferred to Tertiary Care Center _____
☐ Expired Time:____
Notification: Family ☐ Time:____

Debriefing: ☐Yes ☐No

Family Presence Offered:
☐ Family Accepted ☐ Family Declined ☐ Family not Present
☐ Family Support Provider Present

Airway / Ventilation / Circulation

Pulse Oximetry Placed☐ Time:_____ **Time PPV started**: _____

Ventilation: ☐Bag-Valve Mask ☐ ETT ☐ NeoPuff ☐ LMA ☐CPAP ☐Other:_____

Initial Heart Rate _____**Time Chest Compressions Started**: _____ (2 thumb- 2 finger)

Intubation: Time:_____ Size:_____ By Whom:_____

Confirmation: ☐Auscultation ☐ Exhaled CO_2 (colormetric) ☐ X-Ray Suction: ☐ Bulb ☐ Catheter

Cord Gas
Arterial _____ **Venous** _____

Date	Time	Code Leader Signature	Printed Name	Date	Time	Medication RN Signature	Printed Name
Date	Time	Recorder Signature	Printed Name	Date	Time	Respiratory Care Practioner Signature	Printed Name
Date	Time	RN Signature	Printed Name	Date	Time	Provider's Signature	Printed Name

#1093 Admin: S:\FORMS\1093 Cardiac Arrest Record Newborn 11-2022.docx (Eff. 11/2022)
Abbreviations Used: ETT=Endotracheal Tube; UV=Umbilical Vein; EDC=Estimated Date of Confinement; GA=Gestational Age
Rev. 06/2010, 11/2020, 11/2022

1093

Appendix F.

Exeter Hospital Form # 1566 – Pediatric Cardiac Arrest Record

EXETER HOSPITAL
5 Alumni Drive Exeter, NH 03833 603.778.7311

Fax to Pharmacy
603.580.6645

PATIENT ID OR LABEL

Cardiac Arrest Record – Pediatric

Rapid Response Team activated prior? ☐Yes ☐ No Witnessed? ☐Yes ☐ No
Condition when need for **CODE BLUE** was identified? ☐ Pulseless ☐ Pulse (poor perfusion)
Actual Weight:_____kg Broselow™ tape color: _____

Airway / Ventilation
Ventilation: ☐Bag-Valve Mask ☐Endotracheal Tube ☐LMA ☐CPAP ☐Neopuff ☐Other:_____
Intubation: Time:_____
Size:_____
By
Whom:____
_____
Confirmation: ☐Auscultation ☐End Tidal CO_2 ☐X-Ray

Circulation
1st Rhythm Requiring Compressions:_____
1st Pulseless Rhythm: _____
Time Chest Compressions Started:_____
AED Applied? ☐Yes ☐ No
External Pacer On? ☐Yes ☐ No

Date/Time Event Recognized:_____
Location:_____
Time Resuscitation Event Ended:_____
☐ **Survived** – Return to Spontaneous Circulation (ROSC) more than 20 minutes in length
☐ Efforts Terminated (No sustained ROSC)
☐ **Transferred to tertiary care**
Family Presence Offered:
☐ Family Accepted ☐ Family Declined ☐ Family Not present
☐ Family Support Provider Present

Bolus - Dose and Route | **Infusions - Dose /mL per hr**

Time	Breathing: Spontaneous	Breathing: Assisted	Pulse: Spontaneous	Pulse: Manual CPR	Pulse: O_2 Sat	BP	Rhythm	Joules	NS Bolus Dose IV/IO	Dopamine Dose IV/IO	Epinephrine Dose IV/IO	Blood Sugar	Temperature	Comments: i.e.: Peripheral/Central Line Placement/ Chest Tube/ Response to Interventions/ Additional Staff Present

Date Time Recorder Signature Printed Name / Date Time Respiratory Care Provider Signature Printed Name
Date Time Med Nurse Signature Printed Name / Date Time RN/Paramedic Signature Printed Name
Date Time Provider Signature Printed Name / Date Time Code Leader Signature Printed Name

#1566 Admin: S:\FORMS\1566 Cardiac Arrest Record Pediatric 11-2022.docx (Eff. 11/2022) (Also Refer to form 154)
Rev. 12/2015, 1/16, 12/2020, 11/2022

1566

Appendix G.

Exeter Hospital Standard Operating Procedure (SOP) PC-CODE.003-SOP.002

SOP	EXETER HOSPITAL, INC. STANDARD OPERATING PROCEDURE	SOP#: PC-CODE.003-SOP.002 PAGE: 1 of 4 EFFECTIVE DATE: 10/2022

TITLE: Family Presence During Resuscitation Events

REVIEWED DATE(S): 10/2022
REVISION DATE(S): 10/2022

SCOPE: All Patient Care Areas, Nursing, Medical Staff
DEVELOPED BY: Eileen Hollis, MSN, RN, CNL; Code Committee; Patient Care Standards

APPROVED BY: Tina Dionne, Director; Kelly Sigurdsson, Director; Paul Deranian, MD; Donna McKinney, VP, CNE
REVIEWED BY: PCS 07/2022, Code Committee 09/2022

CROSS REFERENCES:
POLICIES / SCOPE OF SERVICE: PC-CODE.003 – Code Blue; (EC).215 – Management of Patient Belongings
STANDARD OPERATING PROCEDURES:
WORK INSTRUCTIONS:
FORMS: Form 154 – Cardiac Arrest Record

CHANGE CONTROL:

Effective Date	A=Add D=Delete C=Change	Description of changes	Responsible Person *(e.g. S.Smith)*
10/2022	A	• New SOP.	E. Hollis
		•	
		•	
		•	
		•	
		•	

SOP	EXETER HOSPITAL, INC. STANDARD OPERATING PROCEDURE	SOP#: PC-CODE.003-SOP.002 PAGE: 2 of 4 EFFECTIVE DATE: 10/2022

TITLE: Family Presence During Resuscitation Events

PURPOSE:
To enhance patient- and family-centered care during resuscitation events, while providing an individualized and holistic approach to the presence of family and ensuring that all are supported throughout the process.

DEFINITIONS:
1. **Family Presence**: The presence of family member(s) allowed in the patient care area, in a location that provides visual or physical contact with the patient during resuscitation events.
   A. If family members are unable to be physically present during resuscitation efforts, such as visitor restrictions or geographical barriers, family presence shall be defined as virtual using appropriate technology to allow as much inclusion in the process as possible.
2. **Family members**: People who have been identified as relatives or significant others, or support persons with whom the patient shares an established relationship.
3. **Resuscitation events**: The restoration of breathing, circulation and normal heart rhythm with the use or combination of chest compressions, medications, invasive procedure, and/or electrical shock.
4. **Family Support Provider (FSP)**: A designated nurse, which may vary based on location, whose responsibility shall be to attend to family members during the resuscitation event and serve as a collaborative liaison between family and code team, ensuring the action steps below are followed.
   A. FSP shall be designated as the following per location as appropriate:
      I. 4 East – Clinical Leader, Clinical Practice Leader, Clinical Practice Nurse Coordinator, Admissions Nurse
      II. 4 West – Clinical Leader, Clinical Practice Leader, Clinical Practice Nurse Coordinator
      III. 3 West – Clinical Leader, Clinical Practice Leader, Clinical Practice Nurse Coordinator
      IV. Family Center – Clinical Leader, Clinical Practice Leader, Charge Nurse
      V. ICU/PCU – Clinical Resource Nurse, Clinical Leader, Clinical Practice Leader, Clinical Practice Nurse Coordinator
      VI. ED – Clinical Resource Nurse, Clinical Leader, Clinical Practice Leader, Charge Nurse
   NOTE: The above-listed nurses may designate the FSP role to another nurse present at the Code Blue.

STEPS IN PROCEDURE:
Infection Prevention
1. Utilize standard precautions
2. Family present during resuscitation events shall use isolation precaution attire/equipment as required.

Action Steps
1. Refer to algorithm on the next page:

SOP	EXETER HOSPITAL, INC. STANDARD OPERATING PROCEDURE	SOP#: PC-CODE.003-SOP.002	PAGE: 3 of 4
		EFFECTIVE DATE: 10/2022	

TITLE: Family Presence During Resuscitation Events

Family Presence During Resuscitation Algorithm

Our goal is to support family presence during resuscitation to the greatest extent possible.

Family presence shall be facilitated, whenever possible, by a family support provider (FSP).

If family **elects to be present**:

1. Confirm no significant objection by code team.
2. Ask the family member if they would like to be present during resuscitation.
3. Before entering the room, describe what they may see, explain roles in room, where to stand, PPE, etc.
4. Prior to entering the room, ensure that Code Team is aware of family presence.
5. The FSP should remain with the family, explaining what is occurring and answering any questions.

If family **elects to be virtually present:**

1. If no family member is present at the hospital, after contacting family. consider virtual presence options.

Disruptive / Unsafe Behavior

In the event the presence of a family member becomes disruptive or undermines the safety of the patient, family or code team, the family member may be removed. Examples:

- Disruptive Behavior
- Combativeness
- Under the influence of alcohol or drugs

If family **declines to be present** or the FSP concludes it is inappropriate:

1. The FSP should remain with the family in an appropriate private waiting area.
2. The FSP should explain what is occurring and answer any questions.
3. The FSP should consider offering virtual presence options.

Post code support:

1. If Return of Spontaneous Circulation (ROSC) achieved -
   - Escort family to new room/unit or comfortable waiting area.
   - Offer water/bathroom/tissues.
   - Ensure patient's belongings are transferred to receiving unit.
   - Notify SW/Palliative team/Spiritual Director as needed, for further support resources.

2. If ROSC not achieved -
   - Offer to bring family closer to patient
   - Remind Code team that family is present; debrief outside of room.
   - Offer water/bathroom/tissues.
   - Explain that equipment will be removed and then they will have time in private with patient.
   - Give family as much time as they need and allow opportunities for questions.
   - Belongings will be sent to security (refer to policy (EC).215).
   - Provide family with bereavement packet, and notify SW/Palliative team/Spiritual Director as needed, for further support resources.

Appendix H.

Pre/Post Self-Knowledge Assessment (Kantrowitz-Gordon et al., 2013)

Question	Answer	Rationale/Notes
1. Family Presence during Resuscitation (FPDR) is too traumatic for family members to witness.	True or **FALSE**	
2. FPDR provides additional support and comfort for the patient.	**TRUE** or False	
3. FPDR provides assurance for the family members that everything possible has been done for the patient.	**TRUE** or False	
4. Studies have shown that family members tend to become disruptive and extremely emotional when present during CPR.	True or **FALSE**	
5. Provision of a family support person to be with the family during the resuscitation is part of the recommendations for FPDR policies.	**TRUE** or False	
6. Excluding family members from the patient's bedside during CPR is inconsistent with a family-centered model of care.	**TRUE** or False	
7. FPDR facilitates a sense of closure and initiation of the grief process in cases where death occurs.	**TRUE** or False	
8. Many family members would opt for family presence again.	**TRUE** or False	
9. Numerous nursing and medical professional organizations have published guidelines supporting the option of FPDR.	**TRUE** or False	
10. FPDR should only occur if all members of the resuscitation team are comfortable having a family member present.	True or **FALSE**	

Appendix I.

Excerpts from the "Family Presence During Resuscitation Toolkit"

First moments: Ask, prepare, position.

(Powers et al., 2022)

Introduce yourself so they understand who you are and that you're there to answer any questions they have, and you'll be explaining what's going on.	•'Would you like to stay and watch, or do you want me to escort you out? What do you feel is going to be best for you?'
Prepare the family by giving general information on the events occurring:	•'Your loved one's heart has stopped, here's the reason why (if we know the reason), and here's what we've done. Would you like to be present and observe what we're doing to try to save their life?" •Before we go in the room, I just want to explain what you're about to see
Prepare the resuscitation team by informing them that family is present or about to enter:	•"The family is coming in" or "We have family here now"
If a code team member objects, it is important to have a conversation and advocate:	•"As the family, they have the right to be a part of the process if they wish and its safe."
Position family in an area where they're not in the way, but can still see everything	•This may need to be just outside the room at times, making sure they can still see in through the doorway or window. Some families may prefer to stay outside the room.

Simulation videos

View each video and complete the reflection questions on the following slides related to each scenario.

*Utilized with permission from Facilitated Family Presence at Resuscitation toolkit (Kantrowitz-Gordon et al., 2012)

Family Presence During a Code: An Adult Trauma event: https://vimeo.com/14865388

Family Presence During a Code: A Pediatric Event: https://vimeo.com/14864545

Family Presence During a Code: A Postpartum Event: https://vimeo.com/14864959

Appendix J.

Reflection Questions "Family Presence During Resuscitation Toolkit"

Scenario Reflection – A Trauma Event

*Adapted from Facilitated Family Presence at Resuscitation toolkit (Kantrowitz-Gordon et al., 2012)

- What were your thoughts about the wife in the trauma room during the code?
- How did one of the team members not being supportive of family presence affect this situation?
- Do you think the Family Support Provider could have done anything differently in this scenario?

Final Reflection

*Adapted from Facilitated Family Presence at Resuscitation toolkit (Kantrowitz-Gordon et al., 2012)

- Were there any thoughts, ideas or concepts about family presence during resuscitation that you had not considered before this session?
- What concerns do you have about implementing FPDR into your practice?

Appendix K.

Practice Update "Green Notebook Activity" October 2022

Name of Activity:
Family Presence During Resuscitation education

Go Live Date(s):
10/18/22

Person Teaching or Responsible for Activity:
Eileen Hollis, MSN, RN-BC, CNL

Pertinent for the Following Areas:
ED, Family Center, 4East, 4West, 3West, ICU/PCU

Brief description of Activity:
Doctoral project through University of New Hampshire to Implement a Standardized Process to Increase Promotion of Family Presence During Resuscitation at Exeter Hospital.

Who needs to know the Information Covered in this Activity?
RN's – Staff RN, Clinical Leader, Clinical Practice Leader, Clinical Nurse Practice Coordinator

Additional Information Included with this Activity:

Family Presence During Resuscitation (FPDR) is a long-standing controversial topic.

- *Perceived barriers to this practice include:*
  - Risk for adversely affecting communication between health care team and interfering with decision making or care (Balogh-Mitchell, 2012; Bradley et al., 2017).
  - *Many clinicians have expressed concern that allowing family to be present would disrupt the code environment and/or be too traumatic for family to witness.*
    - With a controversial topic, it is important to understand perceptions and barriers to the practice!
  - **Identifying perceived barriers to FPDR can begin to provide more family-centered care (Tudor et al., 2014).**

What does the evidence on FPDR show? **Benefits!**

- *Family members present during cardiopulmonary resuscitation (CPR) found the experience to **help with their grieving process, aid in closure**, and assist in **comforting the patient** (Bradley et al., 2017; Tudor et al., 2014).*
- *Advantages to family presence include - **fostering trust** and transparency between the family and healthcare providers and improved **patient and family-centered care** (Doolin et al., 2010).*
- *The practice has demonstrated family members to be more accepting of the resuscitative process, even if a negative outcome ultimately occurs (Bush & Woodley, 2022).*

Why should we practice this at Exeter Hospital?

Our professional practice model represents Relationship-Based Care.

MAGNET RECOGNIZED
AMERICAN NURSES CREDENTIALING CENTER

Professional Practice Model
EXETER HOSPITAL

- This promotes a focus on patients and families, and welcoming open communication.
  - *To match our framework as a Magnet Organization, we need to ensure that care is organized around the needs and priorities of our patients and families!*

Why is Family Presence important?
"Giving family members the choice of presence during resuscitation demonstrates respect for their wishes, and allows them to receive timely information and support needed for participation in vital decision-making" (Powers & Reeve, 2020)

Is FDPR too traumatic for family members to witness?

- Research indicates that patients **would** want their family members present during resuscitation and family members **would** want to be present (Balogh-Mitchell, 2012).
- FPDR can provide assurance to family members that **everything possible has been done** for the patient, as well as **provide additional support and comfort** for the patient and family (Powers, 2020).

The ENA, AACN, AHA, AAP all endorse FPDR, and encourage healthcare facilities to create policies and procedures advocating for the practice (Brasel et al., 2017) (Schaffer & Kremer, 2022)

- They have 3 main recommendations for this practice to be successful:
  - Developing standardized policies and procedures to define the practice and determine appropriate criteria
  - Have a designated support staff whose role is only to support family
  - Provide education to staff that will increase knowledge and confidence by explaining benefits of family presence and guidelines for best practice

What is a Family Support Provider (FSP)?

"Family Support Provider" or FSP will be defined as a designated RN, which may vary based on location, whose responsibility is to attend to family members during the resuscitation events and serve as a collaborative liaison between family and code team.

The FSP is an integral component of FPDR. As a designated member of the health care team, the FSP accompanies the family before, during, and after a resuscitation. This person does not have an active role in providing resuscitative care, but instead serves to provide explanations and support to the family members (Powers & Reeve, 2020)

- Who can take on the FSP role?
  - ANY NURSE! Each department may have roles that are most appropriate, but any RN can step in as the FSP.
    - 4 East – CL, CPL, or Admission RN
    - 4 West – CL, CPL, CPNC
    - 3 West – CL, CPL
    - Family Center – Charge RN, CPL, Family Center Nurse
    - ICU/PCU – CRN, CL, CPL, CPNC
    - ED – CRN, Charge RN, CPL

What Policies are changing?

1. The Code Blue policy now has a responder role clearly defined for the FSP (See PC-CODE.003)
2. There is a Standard Operating Procedure off the Code Blue policy that will outline the role of the FSP during resuscitation events (See PC-CODE.003-SOP.002)
3. The Cardiac Arrest Record will include Family Presence documentation and an area for the FSP to sign (See Form #154)

References:

American Association of Critical-Care Nurses. (2016). Family presence during resuscitation and invasive procedures. Critical Care Nurse , 36 (1)

Balogh-Mitchell, C. (2012). Is It Time for Family Presence During Resuscitation in the OR? AORN Journal, 96(1).

Brasel, K., Entwistle, J., & Sade, R. (2017). Should Family Presence Be Allowed During Cardiopulmonary Resuscitation? Ann Thorac Surg, 102(5).

Bradley, C., Keithline, M., Petrocelli, M., Scanlon, M., & Parkosewich, J. (2017). Perceptions of Adult Hospitalized Patients on Family Presence During Cardiopulmonary Resuscitation. American Journal of Critical Care, 26(2).

Bush, RN & Woodley, LW. (2022). Increasing Nurses 'Knowledge of and Self-confidence With Family Presence During Pediatric Resuscitation. Critical Care Nurse; 42(4).

Doolin, C., Quinn, L., Bryant, L., Lyons, A., & Kleinpell, R. (2010). Family presence during cardiopulmonary resuscitation: Using evidence-based knowledge to guide the advanced practice nurse in developing formal policy and practice guidelines. American Academy of Nurse Practitioners, 23.

Appendix L.

Unit Resource Binder "Family Presence During Resuscitation Toolkit"