

Decreasing Parental Stress in the Pediatric Intensive Care Unit

One Unit's Experience

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The pediatric intensive care unit (PICU) has long been recognized as an emotionally charged and highly stressful place. As early as 1972, Hay and Oken^{1(p109)} described an ICU as “a massive array of stimuli [with] an atmosphere not unlike that of a tension-charged war bunker.” Children admitted to the PICU bring with them families from many different backgrounds, ethnicities, cultures, religions, and socioeconomic strata. Admission of a child to the PICU may be one of the most stressful events for parents, because the outcome is often uncertain, the procedures are

often painful, and intense emotions of anxiety, sadness, and anger are in constant flux. Indeed, one mother described her feelings during her daughter's illness as follows^{2(p66)}:

Most days when I walked through the doors of the . . . PICU, I simply wanted to collapse. The stress was so great that it could have knocked me over. Every single day that Isabelle was in intensive care, even if it was a relatively stable day, felt like a crisis.

In addition, according to several studies,³⁻⁶ nurses and parents have different perceptions about what is stressful about having a child in the PICU. And, many interventions that nurses thought were helpful in reducing parents' stress were, according to the parents, not helpful. These find-

ings suggest that a gap exists between how many PICU nurses practice and what the evidence shows may be helpful for parents.

Although family-centered care is routine practice in the PICU at the Children's Hospital of Austin in Texas, my colleagues and I thought that some areas of care could be improved. We also recognized that individual nurses had different practices in how they approached families admitted to the PICU. Therefore, the goal of the project reported here was to communicate to bedside nurses the most common needs and stressors of parents in the PICU and the interventions that may decrease stress. To determine best practices, I examined the literature on parental needs and stressors in the PICU and on interventions to reduce stress.

Literature Review Parental Needs and Stressors

During the past 20 years, multiple investigators³⁻¹⁷ have described parental needs in the PICU. Throughout these studies, parents consistently rated their highest needs as having



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unrestricted access to their child and receiving honest, straightforward information. Parents had a particular interest in being allowed to be with their child during procedures,^{3,9,11} and they also wanted explanations of tubes and equipment at the child's bedside and discussion of the child's prognosis.^{3,14} Another consistent need was for parents to be able to participate in their child's care.^{14,15}

Commonly identified parental stressors included the loss of the parenting role,¹⁴ uncertainty over the child's outcome,⁹ being separated from the child,⁹ and feeling that the quality of care the child was receiving was poor.¹³ Also, not understanding information provided by medical personnel was a stressor,⁹ as well as being told rather than being asked what was best for the child.²

In a study of parental needs in the PICU, Kasper and Nyamathi¹⁵ identified 280 distinct needs expressed by parents. Clearly, many needs and stressors overlap and have similar themes. Table 1 summarizes the major needs and stressors described in the literature.

Timing and Severity of Illness

The timing and severity of illness appear to be significant stressors for parents. The majority of admissions to a PICU are unplanned. In a study by Eberly et al,⁷ parents whose children had unplanned admissions were more stressed than were those whose children had planned admissions, such as semielective surgery. Huckabay and Tilem-Kessler⁸ think that the uncertainty of unplanned admissions and the vast number of tests and procedures done in a brief time are key factors in this phenomenon. In a study on the effect of the severity

Table 1 Summary of parental needs and stressors in the pediatric intensive care unit

Needs ^{3,14-17}	Stressors ^{2,4,9-11,13,14,17}
Information/illness progression Knowing the prognosis Knowing why things were being done Having questions answered honestly Being called at home when the child's condition changes Knowing about equipment and tubes being used for the child Feeling that there is hope	Information/uncertainty over outcome Not being present when a physician examines the child Receiving inconsistent information Not knowing how long the child will be in the hospital Not knowing what to expect (Will the child die? Will the child have a disability?) Not knowing how life-threatening the child's illness is
Being a parent to the child Knowing the child is comfortable Participating in the child's care in any way possible Feeling that the child is getting the best care and that staff care about the child	Alteration in the parental role Seeing the child in pain Being unable to care for the child Being unable to communicate with the child Not knowing how to help the child
Access to the child Being able to be with the child at all times Being able to see the child frequently without limitations on visiting hours Being able to stay with the child during procedures	Access to the child Being separated from the child during examinations or procedures Being unable to visit at will Hearing the child cry when the parents leave
Physical needs Having food and drink available nearby Having a place to rest that is near the intensive care unit	Appearance of the child Noticing the changes in the child's behavior or appearance

of illness on parental stress, Haines et al⁵ compared stress in parents whose children were intubated with stress in parents whose children were not intubated. The results indicated that the parents of intubated children were more distressed by painful procedures performed on their children and that parents of nonintubated children were more distressed by the behavioral and emotional responses of their children. However, the investigators did not address parental presence during the painful procedures.

Nurses' Perceptions of Parental Needs and Stressors

Several researchers³⁻⁶ have compared nurses' and parents' perceptions of what is stressful about having a child in the PICU. Generally, nurses and parents have different percep-

tions about what is stressful and what interventions are helpful. For example, Miles and Carter³ found that although most nurses recommend that parents go home to rest, only 22% of parents thought that this recommendation was a helpful coping strategy. Also, Haines et al⁵ found that staff personnel were concerned with how information was communicated and thought that parents were concerned with this factor as well. However, parents were not as concerned with how the information was communicated as they were with the honesty and accuracy of the information. In another study, Johnson et al⁶ noted many discrepancies in how nurses and parents ranked stressors. For example, nurses ranked the loud sounds of monitor alarms as one of the most stressful things for parents,

whereas parents rated this concern much lower. Instead, parents were more concerned with how to best help their child at a time when their traditional role as parents was altered.⁶ The findings from these studies³⁻⁶ suggest that nurses should not simply assume that they understand the needs and stressors of parents in the PICU.

Studies Comparing Mothers and Fathers

In other studies,^{11,14} investigators compared maternal stress with paternal stress. Miles et al¹¹ reported that both mothers and fathers found the overall PICU experience equally stressful. Fathers identified the inability to visit and the inability to help the child as most stressful, whereas the mothers identified separation and fear as the most stressful. Fisher¹⁴ reported similar findings except that mothers ranked most needs, such as knowing what was being done to their child, as being of greater importance than did fathers. Therefore, mothers and fathers differ in what they find stressful, although both find the experience as a whole equally stressful.

Prospective Studies

In 2002, Board and Ryan-Wenger¹⁸ published the first prospective study in which long-term effects of PICU hospitalization on family functioning was examined. Three groups of families were studied: those with children in a PICU, those with children in a general care unit, and a comparison group of parents with nonhospitalized ill children. The families in the study were followed up for 6 months after the children's illnesses. The results indicated that parental stress lingers long after hos-

pitalization and that families perceive themselves as more dysfunctional than before the hospitalization.

In more recent study, Balluffi et al¹⁹ examined the prevalence of both acute and posttraumatic stress disorders in parents whose children were admitted to a PICU. The investigators found that 32% of the 272 parents met the criteria for diagnosis of acute stress disorder and that 21% of the 161 parents who completed follow-up met the criteria for posttraumatic stress disorder. Although the long-term effects of parental stress in the PICU are just beginning to be determined, these studies^{18,19} may serve as a warning that the effects of PICU admission on patients' parents and other family members may be more severe than anticipated.

Creating a Tool to Guide Interventions

After examining the literature, I realized that many of the assumptions nurses make about the needs and stressors of parents are inaccurate. I thought that this gap could be addressed by an educational effort to ensure that nurses were aware of the research. However, determining what nurses can do to actually decrease the stress parents experience during a child's PICU admission was more difficult.

Studies²⁰⁻²² in which formal interventions to decrease parental stress were examined have been somewhat limited. However, in nearly every study, the researchers proposed basic nursing interventions on some level. Many of these interventions are fundamental to pediatric critical care nursing. Following the approach used in other process improvements, I "bundled" the interventions into a

time-sensitive algorithm (see Figure). A "bundle" is a concept developed by faculty at the Institute for Healthcare Improvement that describes a collection of scientifically grounded interventions aimed at improving outcomes.²³ When smaller interventions are placed into a larger group, clinicians are more likely to implement all of the interventions rather than just a few of them. The institute has used this concept to develop bundles to prevent ventilator-associated pneumonia and to treat sepsis.²³

In the following sections, I describe the content of the algorithm in more detail and particular studies that support the interventions.

Assessment of Families

With the admission of their child to the PICU, all parents will experience stress to some degree, although families with unplanned admissions experience higher levels of stress than do families with planned admissions.^{7,8} Tools are available to measure parental stress (Parental Stressor Scale Pediatric Intensive Care Unit¹¹) and measure anxiety (Multiple Affect Adjective Check List,⁸ Spielberger's State Anxiety¹¹). These tools contain between 20 and 62 items,^{8,11} and it is probably not practical to use them on a daily basis to assess parental stress. Instead, bedside nurses can rely on parental behaviors as clues to the level of anxiety.

Huckabay and Tilem-Kessler⁸ described the patterns of stress of parents whose children are admitted to a PICU. They found that parents had the highest degree of stress, described as "near-panic levels," on the day of admission. The anxiety levels decreased on days 2, 3, and 4 to a moderately high level.

Admission of child to PICU

Admission assessment/assessment of family functioning

Basic interventions—day 1

<i>Providing information</i>	<i>Enhancing parental role</i>	<i>Developing trust</i>	<i>Providing support</i>
Orient to unit: sights and sounds, alarms, monitors, procedures	Allow option to stay with child during procedures, tests, and resuscitation	Introduce members of health-care team	Consultation with social work or case manager; offer access to chaplain if parent desires
Provide telephone number of unit along with unit welcome letter	Allow parent option to do simple things for child (hold hand, stroke hair, etc.)	Allow access to child, especially during procedures	Ensure parents' basic physical needs are met: food, shelter, place to sleep, etc.
Keep explanations short and simple: limit details			Assess other sources of support (family, friends)

Basic interventions—beyond day 1

<i>Providing information</i>	<i>Enhancing parental role</i>	<i>Developing trust</i>	<i>Providing support</i>
Provide detailed explanations about child's status/prognosis	Allow option to stay with child during procedures, tests, and resuscitation	Ensure continuity of the healthcare team (doctors, nurses, support staff)	Offer access to chaplain if parent desires
Translate information provided by doctors so parents can understand	Encourage parent to participate in child's care (bathe, feed, change diaper, etc)	Allow access to child, especially during procedures	Ensure parents' basic physical needs are met: food, shelter, sleep, etc.
Ask open-ended questions: How can I help you today? How do you think your child is doing today?	Have parent bring reminders of the child (pictures, blankets, toys) from home.	Provide continuity of nursing policies (eg, holding babies on ventilators, visiting policies)	Assess parents' need for laundry and shower facilities, transportation, ability to pay parking fees
Sights and sounds become less stressful; communication is more critical now	Encourage parent to provide comfort to child (hold hand, sing songs, read book, etc)		If present, allow other sources of support access to family

Assess for signs of increased stress*:

Stunned look, staring, difficulty concentrating, inability to ask questions, forgetfulness

Signs of increased stress present:

Refer to clinical nurse specialist, nurse practitioner, social worker, or case manager

No signs of increased stress:

Continue basic interventions

Advanced interventions:

Support group facilitation (formal and informal), discussion with family, family care conference

*Consider other factors, including lack of sleep, hunger, etc.

An algorithm to guide interventions that decrease parental stress in the pediatric intensive care unit (PICU).

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Behaviors that indicate a person is at the near-panic stress level⁸ include a stunned look, staring, difficulty concentrating, inability to ask questions, and forgetfulness. These behaviors are incorporated into the algorithm to indicate increases in parental stress, which alert nurses to the need for more intensive interventions. Of note, other reasons (eg, lack of sleep or hunger) could account for these behaviors. Bedside nurses must use their nursing judgment in determining when a parent might benefit from the expertise of other support staff in the unit, including clinical nurse specialists, nurse practitioners, case managers, and social workers.

Although all families who enter the PICU will experience stress, the degree of stress is certainly influenced by factors other than the child's hospitalization.²⁴ Therefore, bedside nurses should assess each family for factors that may increase or decrease the stress of hospitalization. For example, a family of 7 without a home or adequate social support may find the hospitalization much more stressful than does a family of 3 who has extensive social support. However, this information is only obtained by asking, so a thorough assessment of the family as a whole should be performed at the time of admission to the PICU.

Including questions about a family's composition, financial needs, spiritual needs, transportation needs, and sources of social support on hospital admission forms can provide family assessment data. It is also helpful to know whether the admission is a family's first experience with hospitalization. For families who have experienced hospitaliza-

tions before, the nurse should ask them for their perceptions of those events and try to identify which coping strategies were most helpful for them. Although family assessment data are difficult to record succinctly on a form, a nurse's intuition and observation of family dynamics is often a good measure of how well a family is functioning.

Interventions

Although much has been written about parental stress in the PICU, development and implementation of interventions to address parental stress at the bedside are needed. The interventions that make up the algorithm were culled from the literature on parental stress in the PICU, but they do not represent any researcher in particular. Again, the interventions used depend on the results of ongoing assessment of how a family is functioning and of the parents' stress level.

The interventions are divided into 2 groups: basic and advanced. The basic interventions can be applied by bedside nurses and may already be common practice in some institutions. The advanced interventions are implemented by a clinical nurse specialist, a nurse practitioner, a social worker, or a case manager. The basic interventions are separated into 2 time categories: day 1 and beyond day 1. Huckabay and Tilem-Kessler⁸ and Miles et al¹¹ recommend limiting detailed information on day 1 because the near-panic levels of stress common in parents at this point cause poor concentration. Parents may already have received more information than they can understand, and further information should be simple and straightforward.

The interventions are divided into 4 broad categories: providing information, enhancing the parental role, developing trust, and providing support.

Providing Information Receiving information is a need often stated by parents. On day 1, the parents should receive a basic orientation to the critical care unit.^{3,6,8} This orientation should include the sights and sounds of the unit, such as alarms, monitors, and procedures that parents may observe. Parents should also be given the unit's telephone number and be encouraged to call or have family members call whenever necessary.³ Finally, information given on day 1 should be short and concrete, with limited details.^{8,11} In our unit, this orientation information is provided in a written handout to reinforce the verbal message.

Beyond day 1, parents become less stressed by the sights and sounds of the PICU but become more concerned with receiving detailed information about the child's condition.¹⁰ Every time a nurse or a physician enters the child's room, parents want to know how the child is doing.⁸ Rennick¹³ stated that nurses need to translate the medical information provided by physicians into words the parents can understand. Curley²⁰ found that asking open-ended questions such as How can I help you today? or How do you think your child is doing today? allows nurses to correct misperceptions and find out what the parents think is a priority in the child's care.

Enhancing the Parental Role Alteration of the parental role is a common stressor, and the second category of interventions, enhancing the parental role, addresses this stressor. On day

1, parents should have the option of staying with the child at all times, especially during procedures, tests, and resuscitations.³ Essentially, the parents should have unrestricted access to the child. They should also be encouraged to participate in the child's care and provide comfort measures.^{3,10,13} On day 1, the parents may be too overwhelmed by the child's appearance or the presence of invasive monitoring devices to take an active role in the child's care.⁸ Suggesting simple things the parents can do, such as holding the child's hand, may be helpful. Beyond day 1, parents become less stressed by the noisy and bright environment of the PICU, and they may be willing to take a more active role in the child's care. However, the amount of care the parents provide should always be mutually determined by the nurses and the parents. Finally, Rennick¹³ found that parents want to be encouraged to bring objects from home that the child finds comfort in, such as blankets, animals, and pictures.

Developing Trust The third category of interventions, developing trust, is very important. Simple things, such as knowing the names and roles of members of the healthcare team, are important to parents.² Meyer et al¹⁰ found that parents trusted the staff more when the parents had access to their children during invasive procedures, because such access diminished parental fears, concerns, and regrets about unknown events. Beyond day 1, continuity of care becomes an important factor in developing trust.¹³ Parents learn which physicians and nurses they are comfortable with, and new faces are a source of stress. Parents must determine if the new staff member

is competent, caring, and trustworthy. In addition, according to Sweeney,² policies should be applied consistently by unit nurses. She recounts that she felt stressed when one nurse let her hold her intubated child and another nurse refused because it was "not safe."²

Providing Support Providing support is the final category of interventions. On day 1, parents should have the option of talking with a chaplain; in the study by Miles and Carter,³ 78% of parents reported that praying was helpful. Nurses should determine if the parents' basic needs, such as food, shelter, and sleep, are addressed.¹⁰ Some institutions provide free meal trays to parents during the first 24 hours of a child's admission. All families of children admitted to the PICU should have consultations with a social worker and a case manager. These professionals help ensure continuity and can help families deal with many of the stressors of having a critically ill child. Beyond day 1, these basic needs may expand to include providing laundry and shower facilities. Parents may also need assistance with transportation or parking costs. Finally, nurses should determine if families have other sources of support, such as relatives, friends, or members of the families' church. If these support persons are present, they should have access to the family during the child's hospital stay.

If these basic interventions do not meet parents' needs, the parents will have indications of increased stress.⁸ These indications include a stunned look, staring, difficulty concentrating, inability to ask questions, and forgetfulness. Although these behaviors are difficult to measure, by using his or her nursing judgment,

a bedside nurse is often the person who identifies families at risk. If the nurse determines that a family is at risk, resource personnel such as a clinical nurse specialist, a nurse practitioner, a social worker, or a case manager should be notified to further assess the family and implement advanced interventions.

These healthcare providers are the appropriate personnel to implement advanced interventions because the interventions require a thorough assessment of the family and tend to require more time than a bedside nurse may have to offer. Miles and Mathes¹² found that most bedside nurses provided information about objective aspects of the unit, such as the sights and sounds, machines and tubes, and so on. The authors¹² argue that the parents also need information about the child's emotional and behavioral responses to illness and about the effect of the illness on the overall family. A clinical nurse specialist or a nurse practitioner may be the most appropriate healthcare provider to offer this information, whereas a social worker or a case manager may be the most appropriate person to address sources of stress such as financial issues, housing and transportation issues, and so on. Providing assistance in navigating the maze of the healthcare system can relieve some of the stress parents feel.

In addition, parents often have identified family care conferences as a helpful intervention.²⁵ This discussion between the parents, nurses, physicians, and other support staff involved in the case helped the parents feel some sense of control. The parents felt that they were involved in the decision making associated with their child's care rather than

passively being told what to do. Sweeney² argues that care conferences should be a routine procedure and not just reserved for a crisis or major decision. A clinical nurse specialist, a nurse practitioner, a social worker, or a case manager most likely will facilitate such a conference.

Although formal support groups for parents are a routine practice at many institutions, such groups can be time-consuming to facilitate and parents may or may not feel comfortable participating. In contrast, in the study by Miles and Carter,³ parents stated that informal support groups were helpful in decreasing parental stress; 97% of parents in the study found that talking with other parents in the waiting room was helpful. Parents who show signs of stress may need to know that other parents have found comfort in sharing stories. This finding provides options for a clinical nurse specialist, a nurse practitioner, a social worker, or a case manager to offer both formal and informal support groups for parents.

Creating Consistent Policies

After the algorithm was developed, my colleagues and I realized that successful implementation would require us to examine our policies in 2 areas: allowing parents to hold their critically ill infants and having patients' families present during procedures and resuscitation. We knew that different nurses had different philosophies about these issues and that those differences led to inconsistencies in how we practiced as a whole.

Sweeney² described her frustration with not being able to hold her critically ill infant. Even though the

infant's condition changed little, some nurses would readily allow her to hold the baby whereas others refused, stating that it was unsafe. Clearly, moving a critically ill infant or child has inherent risks, including accidental extubation, dislodgement of intravenous catheters, and changes in hemodynamic status. However, the literature supports the need for parents to be able to hold their child.^{3,9,11,14,15} As for any procedure, nurses must weigh the risks and benefits of moving the child. The problem arises when different nurses have inconsistent ideas about what is safe and what is not.

To make our approach more consistent, we tried to develop guidelines about which patients might be safe to move and which ones would not. However, this approach was quickly abandoned. We realized that developing a list of criteria would only limit which patients could be held. We also thought that this decision could be made primarily by nurses, and we did not want to create an environment in which allowing a parent to hold his or her child required a physician's order. Because the main goal was to create consistency, and not necessarily uniformity, we then took a different approach and made information about whether parents were allowed to hold a child a part of shift-to-shift report. During discussion about each family, we encourage nurses to report whether they allowed parents to hold the infant. We found that this approach worked well and preserved nursing judgment. In addition, this discussion often prompted the nurse going off duty to state how an infant tolerated being held and to give any tips for making the procedure more success-

ful (eg, sedation or suctioning). We also emphasized how to move a critically ill child safely, including having more than 1 nurse or respiratory therapist present and checking all invasive intravenous catheters both before and after moving. These interventions have improved our consistency as a unit without increasing the risk to our patients.

Another idea that needed closer examination was our policy on family presence during invasive procedures and resuscitations. Although our unit has allowed open visitation for several years, many of our staff continued to ask families to leave if a child required a procedure or his or her condition became unstable. It is well documented that most parents want to have the option to be with their child during invasive procedures and resuscitations.^{3,9,11,26-28} Many physicians, and nurses to a lesser degree, still oppose this practice,^{29,30} especially with procedures such as insertion of central catheters or chest tube and intubation. Parents who observe these invasive procedures have significantly less anxiety than do parents who are not allowed to be present,^{27,28} and they rarely interfere with procedures. No increases in litigation associated with family presence have been reported in institutions where parental presence is routine.²⁶ This lack of litigation may be due to the fact that parents can openly see what happens to their child instead of creating the story on the basis of what they are told after the fact. These findings challenge traditional views that being present to comfort their child during invasive procedures is too stressful for parents; rather, their presence reduces parental stress. Of all the interventions listed in the

algorithm, allowing parents the option of being present during invasive procedures and resuscitations most likely is the most difficult to implement. This option is a change in PICU culture and requires support from the entire healthcare team.

In our own unit, allowing a family to be present was inconsistent and depended mostly on which staff members were working at the time. Some staff, including physicians, were very good about offering the option, whereas others were unaware of the research on family presence and thought that it was a risky offer to extend to families.

In order to determine initial support for a policy on family presence, a survey of the staff was completed. This survey, which was based on materials purchased from the Emergency Nurses Association,³¹ included nurses, physicians (including subspecialists who admit patients to the PICU), respiratory therapists, social workers, chaplains, nursing assistants, child life staff, and administration. Generally, support for offering family presence was greater among nurses than among physicians, although pediatric intensivists were more supportive of the idea than were subspecialists (eg, surgeons and cardiologists). Most importantly,

the survey revealed that many of our staff had preconceived notions about family presence that are not supported by research. For example, many were concerned that families would interfere with the procedure or resuscitation; however, such interference rarely occurs.^{32,33} The American Association of Critical-Care Nurses (AACN) recently released a practice statement on family presence³⁴ that provides a succinct summary of the current research.

In addition, according to a survey³⁵ of 984 members of the AACN and the Emergency Nurses Association, only 5% of units have a written policy allowing family presence, although many nurses reported offering family presence despite the lack of a policy. The AACN advocates that all units formalize the units' practice by creating a policy.³⁴ The AACN also requires units applying for the Beacon Award for Critical Care Excellence to have a policy in place on family presence.³⁶ Therefore, using the sample provided by the Emergency Nurses Association,³¹ we created a policy allowing the option of family presence in our unit and developed an educational campaign about the new policy.

The purpose of the educational effort was to address the concerns that staff had identified in the survey.

Table 2 Lewin's theory of change³⁷⁻³⁹

<p>Rules to be considered before a change process</p> <ul style="list-style-type: none"> Change should be implemented only for a good reason Change should be gradual Change should be planned Everyone affected by the change should be involved in planning <p>Stages of change: a system is static until a force moves it forward</p> <ul style="list-style-type: none"> <i>Unfreezing:</i> Awareness of need to change develops; people become more willing and ready to change <i>Experiencing the change:</i> Alternatives are explored, goals and objectives are defined, plans and timelines are created and the change is implemented <i>Refreezing:</i> The change is integrated into the person's work; the change is internalized
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Several approaches were used. We reviewed the research as well as the practice recommendations at staff meetings. This information was also summarized into a brief handout that was made available in the staff lounge. One of the most beneficial approaches was informal discussions at the nurses' station; this method was the most effective way to discuss the idea with both nurses and physicians.

A critical component to the success of a family presence policy is getting the assistance of family facilitators who can support the family during the procedure or resuscitation. In our unit, we called on our social worker, chaplain, and child life staff. In fact, many of these personnel were already accustomed to performing the role, and they did not require very much convincing. The biggest challenge was determining who the staff could call during off hours, such as during the middle of the night or on a weekend. Although a social worker or a chaplain is usually in the hospital during these hours, that person is usually assigned to the emergency room and may or may not be familiar with the idea of family presence or the role of family facilitator. The social worker and chaplain assigned to the PICU consistently work to provide information to their colleagues who provide care when the PICU social worker and chaplain are gone, but providing such information is an ongoing challenge.

Living the Change Process

When the change process is considered, using a theoretical framework as a basis for what can be expected (Table 2) is helpful. One of the best known change theorists, Lewin, sug-

gested 4 rules (Table 2) that should be considered before embarking on a change.³⁷

In the case of our parental stress bundle, we concluded that many good reasons existed to implement the change, including a stronger commitment to family-centered care and a potential decrease in the stressors of parents with critically ill children. The process was gradual; it took more than 2 years to fully implement the change. The change was planned and guided by interventions supported by research. Finally, staff at all levels were involved in planning. Although I had a goal for where the unit should go, the bedside nurses and the PICU physicians were the ones who chose the path and ultimately determined what would work best for the unit.

Lewin also describes 3 stages of change: unfreezing, experiencing the change, and refreezing (Table 2).³⁷ The process begins with the idea that people and systems tend to stay static in an organization until an influencing force moves the organization forward and unfreezing begins. During the unfreezing stage, people develop an awareness of the need for change and become more ready and willing to change.³⁸ Clearly, people unfreeze at different rates. For example, some staff members accepted the idea of family presence quickly, whereas others remained resistant until they had seen for themselves that family presence could work. The next stage, experiencing the change, includes exploring the alternatives, defining goals and objectives, planning how to accomplish the goals, and implementing the plan for change. Examples of this phase include the development of the algorithm, revis-

ing and creating the policies, and providing education to staff. For the change process to be sustained, refreezing must occur. Refreezing involves incorporating the change into everyday work, as well as internalizing the change. Ideally, many of the components of the algorithm will become the expected practice of all of the nurses in our PICU, and as these interventions are internalized, they will become "the way we do things."

Lessons Learned and Outcomes

Although the process of change is unique in each unit, a consistent factor is that change almost always takes longer than expected.³⁹ The project described here took more than 2 years to implement, and some staff members are still in the refreezing phase of the change. However, as a whole, our unit has achieved the main goal of the project, namely to increase bedside nurses' knowledge of the needs and stressors of parents of critically ill children and of the interventions that could decrease that stress. Along the way, we were also able to make our practice as a whole more consistent and create a policy to allow the option of family presence.

Although I was the driving force behind this change, the nurse practitioner in the PICU was also a powerful force. She makes a consistent effort to keep parents updated, and families have commented that they understand what is going on with their child after talking with her. In addition, because attending physicians, residents, and nurses work in rotation and work shifts, the nurse practitioner is the most consistent person that families see at their child's bedside. Because parents find new and

unfamiliar staff a source of stress, it is natural that they look to the nurse practitioner as a reliable source of information, because they know and trust her. The addition of a nurse practitioner to our staff most likely has decreased parental stress in our unit.

Family presence is now consistently offered to families in our unit. In fact, the physicians who initially doubted its benefit to families have become some of its strongest proponents. One physician stated that it was not until he talked with parents who had been present when their infant died that he became convinced that allowing them to be present during the resuscitation was the right thing to do. The parents expressed to him how much it meant for them to be with their infant when the infant died and said that they found comfort in knowing that everything possible was done.

The algorithm (see Figure) currently is used as a tool to remind nurses of what the best practices are to decrease parental stress. Many nurses have integrated knowledge of best practices into their daily work and do not need to reference the algorithm on a daily basis. However, the algorithm is an effective tool for our newer, less-experienced nurses because it serves as a checklist for what they can do to decrease parental stress. The algorithm, along with a discussion about parental needs and stressors, is included in our basic orientation.

When designing the algorithm, I was concerned that the indications of increased stress (eg, stunned look, staring) were somewhat nonspecific, because other factors (eg, lack of sleep, hunger) could produce the same indications. The idea was to cue bedside nurses to behaviors that could

indicate increased stress and indicate families who might benefit from the services of a nurse practitioner, a clinical nurse specialist, a social worker, or a case manager. Although these professionals are involved with each family admitted to the PICU, the level of involvement varies according to the dynamics of the unit. However, we found that our bedside nurses can identify families who have signs of increased stress. In essence, the nurses' identification of these families often prompts advanced interventions that otherwise might not occur until the next day.

Of the advanced interventions described in the algorithm, the family care conferences have been the most helpful. Although we used this technique before implementation of the algorithm, the number of family care conferences has increased dramatically during the past year. One of the recommendations by Sweeney² was to make care conferences a routine practice rather than a way to deal with a crisis. Clearly, families get a much clearer picture of the plan and their child's prognosis through the information sharing that occurs at these conferences.

Conclusion

In summary, the algorithm presented here provides a bundled set of interventions to decrease the stress experienced by parents whose child has been admitted to a PICU. Practical strategies for implementing this algorithm and its accompanying interventions are discussed. Although these interventions are basic to pediatric nursing, when used as a whole, they help pediatric critical care units promote family-centered care more effectively.

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