

# Preparation of the Pediatric Patient for Invasive Procedures

## ABSTRACT

It is well documented in pediatric literature that intrusive healthcare experiences can have a profound negative impact on a child's psychological well-being for months to years after the experience. The purpose of this article is to share some general techniques and strategies for fostering patient coping. By utilization of techniques for preparation, procedural support, and follow-up, healthcare providers can minimize adverse effects of the patient's experiences in healthcare settings.

## CHILD LIFE SPECIALISTS

As early as the 1950s, childcare advocates began to recognize that hospitalization can have emotionally traumatic consequences for the pediatric patient. Therapeutic techniques, play therapy, activity therapy, and recreational therapy with pediatric patients existed, but there was no training for those who did the work and no oversight as to the quality of services provided. The Child Life Certifying Committee (CLCC) sets standards for training people to provide support for hospitalized children and families.<sup>1</sup> Child life specialists are trained professionals who focus on the strengths and sense of well-being of children while promoting their optimal development and minimizing adverse effects of children's experiences in healthcare or other potentially stressful settings. Candidacy for child life specialist entry requires a degree in 1 of the following professions: early childhood education, special education, clinical psychology, counseling, or therapeutic recreation. Upon completion of course requirements, candidates must successfully complete a 480-hour internship at an accredited healthcare facility under the direct supervi-

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sion of an experienced certified child life specialist (CCLS). The candidate must demonstrate skill in tasks such as procedural preparation, stress and pain management, child development, and documentation prior to eligibility to sit for the certification examination. Once the candidate has passed the examination, he or she can begin work as a CCLS.

The Child Life Council (CLC) states,

Child life specialists use play to promote effective coping. They are skilled in interventions such as preparation, stress and pain management, education, and self-expression activities. With a strong background in development and family systems, child life specialists promote family-centered care in pediatric settings and play a vital role in educating caregivers, administrators, and the general public about the needs of children under stress.<sup>2</sup>

## FOSTERING COPING

The goal for pediatric healthcare includes a commitment to maintain children's health and to treat these young individuals for a gamut of illnesses, conditions, injuries, and traumas. Clinicians involved in pediatric healthcare, therefore, must be cognizant of ways to foster each young patient's ability to cope with interventions necessary for successful treatment. Certainly, healthcare experiences, whether occurring in an inpatient unit, in an emergency department, in an ambulatory procedure center, or in a laboratory, can be emotionally charged for both young patients and their parents.

Some factors that contribute to patient and family stress include unfamiliarity with the environment and processes, uncertainty of findings and fear of outcomes, fatigue, and the fact that painful, intrusive procedures are often a part of diagnostic and treatment plans. It is well documented in the pediatric literature that intrusive healthcare experiences can have a profound impact on a child's psychological sense of well-being and ability to cope with current and future healthcare experiences. Studies have shown that such experiences can have long-lasting effects, from months to years.<sup>3-5</sup>

The process of healthcare delivery should be interwoven with strategies to help patients develop coping skills to mitigate distress and protect their sense of self.

Because of limited cognition and life experiences, children possess fewer coping abilities when faced with unfamiliar and potentially frightening situations.<sup>6</sup> However, clinicians are in a position to foster their capabilities to manage healthcare experiences. It is important to assist children to feel like a victor instead of a victim in procedural situations. In fostering such a process, clinicians can help maximize parents' potential to be their children's greatest support and advocate in the healthcare arena.

In 1983, the Association for the Care of Children's Health (ACCH) sponsored a research study to evaluate the impact of providing systematic intervention to help children cope with the healthcare environment and, more specifically, intrusive procedures. Interventions included preparation, support during the event, and postevent follow-up. Children in the experimental group fared significantly better on a number of psychosocial measurements. The children in the study group were less distressed, coped more successfully, had a greater understanding of hospital procedures, and showed significantly better adjustment 10 days after discharge than the children in the control group. Children in the study group who had surgical procedures were quicker to walk, void, take oral nourishment, and return to a regular diet, and they spent less time on initial narcotics than those in the control group.<sup>7</sup>

The purpose of this article is to share some general techniques and strategies for fostering patient coping. Clearly, the developmental and idiosyncratic uniqueness of an individual child will make some strategies more suitable than others. The intent of this article is to give an overview of potential approaches and techniques for the preparation, procedural support, and follow-up found to be valuable in the ACCH study.

## PSYCHOLOGICAL PREPARATION

Psychological preparation refers to helping children know in advance what to expect and how to manage the experience.<sup>8,9</sup> It can significantly enhance their ability to cope. Understanding the what, where, when, and how of an upcoming experience, to the extent their cognition allows, can help children enter into the event with greater readiness, confidence, and competence. The child's previous experiences, cognitive ability, style of learning, and coping should be taken into consideration when planning the types of interventions that may be most useful. Parents of young children can be particularly helpful in enabling the healthcare provider to know their child and how they are generally best comforted and reassured.

## Delivering the Information

Clinicians must conscientiously provide terms and explanations on a developmental level that do not result in the child feeling confusion or betrayal. Dishonesty with a child is a breach of trust and can increase the patient's anxiety. Parents may avoid addressing with their child what is to take place during a procedure; usually parents do so as a measure to protect their child or because they may not know what language to offer in consolation.

As a starting point, it can be valuable to clarify why a procedure is being performed and what benefit will be derived regarding diagnosis or treatment. Such explanations can reinforce the goal of helping care for the child and lessen the burden of the experience. Clarity of purpose can help negate a child's misinterpretation or misperception that a procedure is punishment for some imagined wrongdoing.

In describing a procedure, one strategy is to frame the information by reporting what other children have described as their experience. Another is to use softened terms that children can comprehend without increased fear or worry. Minimally threatening language involves using words that convey the information in honest, but less ominous terms, such as referring to a surgical incision as an opening versus a cut. Another example of a softened term may address medication administration in a manner that allows the child to express what he or she is feeling during the procedure. The clinician may approach the child by saying, "Some children say they have a warm feeling when the medicine is given. What do you feel?"

Sensory information is a key component of preparatory explanations. Children can benefit from knowing how something will look, feel, sound, smell, or taste.

This makes the event more predictable for the child and limits fear of the unknown. Preparation for anesthesia induction by inhalation provides a good example of sensory information a patient can find useful in clarifying the upcoming experience. It is helpful to describe how the "medicine air" smells and how the flow of it feels and sounds.

## Reinforcement With Verbal Explanations

Efforts to prepare the child should not rely exclusively on verbal explanations. Depending on the particulars of the patient and situation, pictures, props, demonstrations, and rehearsals may enhance a child's ability to absorb and master information. Telling a child about the appearance of staff and the environment of the operating room may be far less effective than giving them a firsthand look, such as during a pre-op tour or providing photographs. Giving patients the opportunity to handle and explore a peripherally inserted central catheter or rehearse with an anesthesia mask can reinforce and give clarity to verbal descriptions.

## Encouraging Questions

As with interpersonal communication, it is useful to watch for nonverbal reactions, encourage questions, and give opportunities to demonstrate understanding. For example, if using a series of photos to prepare a patient for surgery, the child can use those same photos to retell the story of what will happen. Some patients enjoy reviewing the sequence of events multiple times as a way to rehearse for their own experience.

Preparation is more than providing just information. It is a way of weaving positive messages into the preparation text to instill confidence, empower patients and parents, and reassure patients that they will have a successful outcome upon completion of the event. This participatory role includes not only that of the patient and parents, but also that of doctors, nurses, technicians, and others involved in the event. In the context of the preparation, clinicians can define each participant's role in the process. Defining roles helps all players focus on their assigned tasks during the actual procedural event.

## SUPPORT DURING THE EVENT

### Agreeing Upon a Plan

During and after preparation, a plan should be developed to help patients cope during the procedure itself. With input from the patient and parents, staff can make recommendations including who will be present as a primary support person or "coach" and what coping strategies will be employed, such as distraction, breathing, and relaxation techniques. Having a plan instills confidence on the part of patients and parents and gives another opportunity to clarify expectations.

Ross and Ross<sup>10</sup> reported that when children were asked what helped them most during other stressful events, 99% of children stated that having their parent present provided the most comfort when in pain. This should guide clinicians as they consider parent participation during a child's procedure. Working from the premise that parents know their children best and have the greatest potential to support and comfort, other variables are weighed, such as whether a parent feels or appears able to serve in the support role or whether the procedure will be too difficult for the parent to witness. If parents are present but appear unsure, a CCLS can help them understand how to be most helpful by role modeling and offering suggestions. If the parents are focused on the procedure, a CCLS can redirect their attention to providing support for their child. If they become exhausted, unnerved, or overwhelmed, the CCLS can also give them permission to step back or leave. Studies have shown that parents can learn effective ways to help their children cope with painful

procedures.<sup>11,12</sup> At the same time, each situation must be assessed on its own particulars by welcoming parents to participate when it appears to be in the best interest of the child and parent.

### Supportive Positioning

Positioning for comfort is a strategy developed by Barbara Stephens, RN, MN, CNS, and Mary Barkey, MA, CCLS, from the Rainbow Babies and Children's Hospital, University Hospitals of Cleveland. In response to requests from peers to help patients manage painful procedures, they developed techniques that can reduce the stress children experience during such events. Early in their investigation, Stephens and Barkey recognized that children felt more vulnerable and less in control when forced to lie down for a procedure. The child's struggle to sit up often led to further restraint by adults who attempted to keep the child safe. Through trial and practice, Stephens and Barkey identified a series of comfort holds that allowed children to remain seated rather than in the prone position for procedures. For example, in the face-to-face position, the child sat on the adult's lap, chest-to-chest with legs wrapped around the adult's waist. These "nonaggressive" sitting positions resulted in the following positive outcomes: (1) secure holds, (2) close physical contact with the parent or caregiver, (3) caregiver participation in positive assistance rather than in negative restraints, (4) sitting position promoted a sense of control, (5) successful immobilization of the extremity was achieved, and (6) reduced need for number of staff to complete the procedure. As part of the plan, an optimal position for the procedure should be matched with an accommodating comfort hold when possible.<sup>13</sup>

### Coaching

Verbal coaching in a calm and reassuring manner enables patients to remain more focused and less troubled. It is important to have a single person guiding and supporting the child through the procedure. It is best to use a CCLS to focus on the emotional needs of the child and parent. If a CCLS is unavailable, consider identifying an individual among those in the room to attend to the patient's need for information and reassurance. Doing so will help the patient train to one voice and strategist.

Generally, school-aged patients are able to tell the person coaching them how much information and forewarning they prefer as the steps of the procedure unfold. It can be helpful to reinforce previous preparation by reminding the patient about what was discussed. "Remember when we talked about this? Now would be a good time to take a deep, slow breath." Throughout the procedure or during parts of the procedure when the patient is aware, it can be useful to reassure the child

that progress is being made toward completing the event. Children generally respond favorably when given feedback about what they are doing well. It is most effective to praise specific behaviors that are enabling the staff to do the procedure and enabling the patient to cope. Rather than praising the child for being good or brave, cite an action such as blowing on a pinwheel or participating in a distraction activity that was helpful.

### Relaxation

Relaxation can take many forms. Dimming lights, playing soft music, lowering voices, and wrapping a child in a warm blanket can create a relaxing environment. Transitional objects such as stuffed animals can help bridge the familiar with the unknown, add an element of security, and serve as an object for stress release. A pacifier, coctaneous massage, or progressive relaxation exercise can promote a restful state for the patient. Grip-and-release techniques with someone's hand, a stress ball, or other squeezable object can promote relaxation as well.

### Breathing

A typical response to stress or pain is breath holding. It can heighten the experience of pain. During a procedure, the child's coach can encourage deep breathing. Blowing on a pinwheel is a very visual way for a patient to focus on taking slow, controlled breaths. An older patient may be able to visualize blowing away their pain or stress.

### Distraction

Another way to promote coping is to provide distraction to shift attention away from the procedure and pain and onto more enjoyable things.<sup>14-16</sup> Distraction, also referred to as diversion or alternative focus, can be effective for toddlers and older children. Sources available to engage young patients during a procedure may include toys with lights and sounds, pop-up books, magic wands, I Spy™ books (Scholastic, Inc.), and storytelling. It is the author's experience that older children have a greater selection of distraction options. Many items, such as pinwheels and books, can be used with all ages with variations on how they are used and what cues are given to the patient to maintain focus.

All the techniques described can be used in combination with sedation. The techniques are useful to keep the child focused while medical staff are preparing for the procedure. Children often become anxious prior to receiving sedation and can begin to lose their control when not helped to focus and stay calm. With the presence of a CCLS, coach, or supportive adult, children often require less sedation to remain calm. Often, when the sedation begins to wear off, children become disori-

ented or confused and need assistance in knowing what has transpired and what is yet to come.

## POSTPROCEDURAL RECOVERY

Once the procedure is complete, it is helpful to reassure the patient that the experience is truly finished. Children frequently inquire about how long a procedure will take. They are also reassured to know that a procedure is finished. An effective way to reinforce that statement is to provide a sticker or "treasure box" reward. The latter may be preferable because it allows choice and promotes a return to normalcy through play.

Revisiting the child to assess their memory and perceptions of the procedure is an excellent way to provide clarification, offer support, and reinforce coping strategies that were used successfully. The timing of this follow-up will vary depending on the number of conditions and contingencies. If the procedure was done on an outpatient basis, parents can be guided to do this with the patient at home. The care provider can recommend ways to engage the child in a discussion related to the experience with an invitation to call the caregiver if any questions or concerns arise.

### Medical Play

Some children continue to struggle with the residual effects of having gone through an intrusive procedure. For those children, medical play can be a way to work through feelings related to their experience. Medical play gives children an opportunity to play out feelings in a supportive, therapeutic environment under the supervision of a supportive adult, such as a CCLS. Children can be given the opportunity to use actual medical equipment to reenact their experience. The CCLS can gain insight into the child's understanding and help clear up any misconceptions the child may have related to the event.

## CONCLUSION

Clinicians have a responsibility to their patients to protect them from experiencing trauma during the process of healing their bodies by implementing proven strategies to promote coping. Children can ultimately learn to cope and deal successfully with a stressful experience with the assisted guidance of a CCLS or an adult coach.

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