

Introducing Nursing Students to Pediatric End-of-Life Issues Using Simulation

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This article describes the first pediatric death experienced by a 20-year-old nurse. This was a disturbing experience that led to the development of strategies as a faculty member to use when teaching nursing students about pediatric end-of-life issues using simulation.

This article describes those strategies.

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This article describes the first pediatric death I experienced as a 20-year-old, new nurse, just out of school with a little over 6 months on a pediatric oncology unit. The shift had just started, and I was making rounds for patient assessments. When I came to my last patient, there were 2 physicians in the room assessing a little boy, Tony, who had a brain tumor. Suddenly, Tony began to have a seizure, and I was told to get phenobarbital. I remember running to get the narcotic keys, unlocking the 2 cabinets, drawing up the phenobarbital, and then running back to the room. When I got there, they told me he was gone; he was dead, and then they left the room. I was shocked. I was sad. I felt guilty. I felt loss. I had not realized that children die, and little in my education had taught me how to deal with such an event.

Later in my career, I drew from this experience when given the opportunity to teach a pediatric end-of-life lecture. A classroom approach to a delicate topic such as end-of-life issues for pediatric patients presents a challenge to nursing faculty. It can be difficult to explain to students a child's concept of death and what this means to them. Perhaps equally challenging is explaining how a health care professional might deal with a

dying child's parents, particularly with an unexpected death. This can be quite difficult, even for experienced nursing faculty. Leading students to a deeper understanding of what it means to experience a pediatric death, including emotions they might feel as health care providers, takes more than a lecture. However, this deeper understanding might be accomplished by adding to lecture material a classroom simulation that uses role playing by students to encourage active learning and enhance communication and listening skills.

■ BACKGROUND AND SIGNIFICANCE

In 2004, the United States had more than 53 000 pediatric deaths, with more than 17% of those deaths unexpected.¹ Almost three-fourths of pediatric deaths occur in hospitals every year, but few studies have addressed the perspectives of pediatric health care providers.² Currently, pediatric palliative care education in nursing curricula is limited.³ Yet, palliative care education addresses not only the needs of the child who is dying, but also the communication needs among health care professionals and families and support for health care professionals providing care in these circumstances.

The primary focus of baccalaureate nursing education is on health promotion and care of acutely ill persons. The topics of death, palliative care, and unexpected death are typically cursorily introduced to students, and very few educational materials presented prepares nursing students to encounter a death, especially a pediatric death. Although many nursing curricula address death and dying by focusing on adults, little is discussed on the impact, expectations, and the range of emotions students and staff nurses may experience when faced with a pediatric death. With the various clinical sites and patient units that students rotate through as part of their clinical training, the possibility of encountering a pediatric death or resuscitative effort is high. Faculty members and students may not realize the lack of preparation that students receive for pediatric deaths until they experience an actual death. Also, this is one of the top fears of students.

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Traditional approaches to teaching pediatric end-of-life such as PowerPoint-enhanced lectures provide content but do little to stimulate critical-thinking skills and engage cognitive and affective components of learning.⁴ Innovative approaches that stimulate cognitive and affective learning provide basic content as well as stimulate interactions concerning emotional aspects of pediatric end-of-life issues.

The use of simulation technology in nursing programs has grown rapidly for many reasons. In educational terms, simulation allows for the creation of a patient scenario with presentations of signs and symptoms that allow students to interpret and act on information. Simulation allows students to care for a patient and react to changes in the patient's condition without causing harm. Active learning, where students participate in activities such as role playing, simulation, and open discussion, not only can enhance their clinical reasoning, but also allow for development of clinical skills along with communication in a safe environment. In addition, the use of simulation can promote acquisition of clinical competencies.⁴ Furthermore, students realize that, when dealing with traumatic events such as the death of a child, caring and compassion must accompany clinical competence.

With the sophistication and growth of technology, human simulation has made great strides in nursing education. The use of simulation, role playing, and open

discussion promotes active learning that appeals to different styles of learning and is consistent with transformative thinking and a curriculum that focuses on caring.⁵ These activities allow for the transfer of problem-solving skills, clinical skills, and dealing with the emotional implications learned in lecture to be applied in a simulated, safe environment.^{6,7}

■ PREPARING THE LECTURE AND SIMULATION ACTIVITY

In preparation for the lecture and simulation activity, I felt it would be more beneficial for the class members observing the simulation if students actively participated in the scenario, rather than faculty. A student clinical group was approached about performing the activity in front of their peers after the end-of-life lecture. Students in the clinical group reviewed the scenario and indicated they were eager to participate. The various roles and responsibilities of the health care providers that they would portray were reviewed with the clinical group prior to the lecture and simulation. The student-actors were given a loosely scripted scenario, because I decided the scenario would be more realistic to the class with conveying emphasized emotions rather than delivering memorized lines.

Learning Objectives

After deciding to combine the lecture with simulation, role playing, and open discussion, I identified learning objectives. Considering the time limitation of a lecture period, I developed these 3 objectives:

1. Students will explore the psychosocial and emotional responses of parents, siblings, and nurses to life-threatening pediatric emergencies.
2. Students will identify critical-thinking skills needed by nurses to effectively manage a pediatric code.
3. Students will examine the various aspects of support needed by family members and the health care team to cope effectively with expected and unexpected losses.

■ PRESENTING THE LECTURE AND SIMULATION ACTIVITY

The lecture was presented in an open forum, allowing students the opportunity to ask questions and express thoughts. Students explored the psychosocial and emotional responses of parents, siblings, and nurses to life-threatening pediatric emergencies and deaths during the open discussion lecture. A guided imagery exercise was planned for use prior to the lecture to help students connect with potential emotions of patients' family members and their own feelings. Issues to be addressed in the lecture included children's concepts of death and

interventions, family concerns and needs, follow-up care, and staff needs in dealing with a pediatric death. Short- and long-term illnesses, as well as sudden death in children, were addressed. In the lecture, students would be able to ask questions and discuss their feelings and concerns about issues as they arose.

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As with the student-actors in the clinical group (who reviewed the equipment at rehearsal), the remainder of the class, the student-observers, reviewed the equipment to be used and expectations of staff during a code, prior to the simulation. Because the scenario required an interdisciplinary team during the code, as in real life experiences, it was important that the roles and responsibilities of all the health care professionals (eg, physicians, respiratory therapist, and chaplain) were included in the lecture.

The various responsibilities of the nurse(s) included intravenous (IV) line starts, cardiopulmonary resuscitation (CPR), equipment from the Broselow cart, medication administration, and documentation. With the death of a child, particularly an unexpected death, the child's appearance, with tubes and IVs needing to remain intact for possible autopsy, could be stressful for family members to see. In fact, most pediatric unexpected deaths require an autopsy to identify the cause of death. Thus, it was emphasized to students that it was important for families to understand how their child would appear after death and for parents to know that they could clean their child's body or hold their child. Expected and unexpected pediatric deaths were discussed in addition to children's concepts of death.

The Scenario

The simulation scenario focused on an unexpected pediatric code with an unexpected death. To prepare for the simulation, students identified critical-thinking skills needed by nurses to effectively manage a pediatric code. The equipment used during a pediatric resuscitation was again reviewed—Broselow cart, resuscitation tape, intubation equipment, IV monitors, and nasogastric tube—and explained to students. Because we used SimBaby (Laerdal Medical, Wappingers Falls, NY), cardiac monitoring was possible to show heart rhythm changes to the observers in the class. Because of time restraints, SimBaby was orally intubated and had IV access and a

nasogastric tube placed prior to the simulation activity. The equipment on the SimBaby was shown and explained to the class, and then the students were told of "Billy's" story.

In the scenario, Billy, our SimBaby, had had a seizure and had stopped breathing; his "parents" immediately called emergency medical services. Billy was taken to the emergency room (ER) in full arrest with CPR in progress. This part of the story was revealed to the class before the simulation began. The students were also informed they would see a resuscitation in progress. It was important for them to know that, if the activity was too difficult for them to watch with the many emotional issues occurring, they could step out of the room. The cardiac monitor was turned on, and the students began CPR and other resuscitative measures for Billy.

The "chaplain" explained what was happening to Billy and met the students portraying the parents at the doorway of our ER. The parents were upset at what had happened to their child and wanted to know how he was. The doctor was asked by the chaplain about Billy's status and was told the prognosis was poor. The student-observers also saw CPR in progress on Billy as the conversation was occurring. The parents were then asked if they wanted to be present during the efforts and were told what they would be seeing. The parents were then led to the ER area where Billy was, accompanied by the chaplain, and were seated so that they could observe what was being done to their son.

After some time had elapsed, the physician informed the parents the prognosis was not looking good for Billy and offered them the option of discontinuing the resuscitative efforts. The family talked with each other and made the decision to stop the efforts. The class saw their peers stop performing CPR and observe the child.

With the use of the cardiac monitor and computer screen connected to SimBaby, the rest of the class was able to see the heart rhythm change and go to asystole. The physician then put the stethoscope to the chest, listened, walked over to the parents, and told them Billy was gone. The cardiac monitor was turned off. The nurses gently cleaned Billy's face and arms. The nurse then gave the parents the option to hold their son. The actors portrayed grieving parents to help bring this simulation to life for their peers. The parents requested to hold their child, and a chair was placed next to the stretcher for them to hold Billy. The nurses told the parents they were sorry for the loss of their child. They stayed near the family, but not too close. There was an understanding that tears, silence, and a presence were all comfort measures for the family; this was also discussed in the lecture as well.

After the simulation was completed, the class was given a moment to reflect before they verbalized feelings

and asked questions. Debriefing also occurred at this time in an open forum with a question-and-answer session. Students examined the various aspects of support needed by family members and nurses to cope effectively with expected and unexpected losses. The importance of nurses taking care of themselves was addressed. Student questions included whether staff could attend a child's funeral, especially for a child they had cared for over time; send a card to the family; and what to do if someone lost emotional control (family or professional staff). Perhaps the most provoking question asked was: "How do you deal with a child who dies then go home and be a parent?"

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This teaching strategy has been used for 6 semesters and has received many positive comments from students and other faculty. In addition, the simulation has been performed with an emergency physician and respiratory therapy student participating in the simulation, allowing students to hear from differing perspectives. In fall 2008, medical, respiratory care, occupational therapy, and nursing students attended the lecture with their faculty. The simulation was presented with respiratory care and nursing students in the student-actor roles. (Medical students were not available for a rehearsal.) Students were able to ask an interprofessional group of faculty members and students about their experiences and their communication with each other during the resuscitation. All faculty took part in the open discussion and accepted questions from students as well as shared experiences. With the fall 2008 lecture, the child in the simulation scenario was an abused young girl. This allowed for an open discussion from all students and faculty on other ethical issues such as reporting abuse to children and adults, maintaining professionalism, and coping.

As interest in this simulation activity grows, the aim is to expand the simulation to include additional disciplines, with an emphasis on interdisciplinary communication among the disciplines and providing support for each other. It is also a beginning approach to introduce students to pediatric palliative care education.

Implications for use of this strategy in health professions education are many. Exposing both students

and health care professionals from other fields to a pediatric death in a safe environment outside the clinical area may increase their ability to deal with this situation when it occurs in real life. Giving them the knowledge about feelings and emotions they may have and possible resources can help them in dealing with such events.

This activity can also provide an open dialogue for discussing end-of-life issues among children, their families, and an interprofessional team. In the dialogue, students practice communication with children, families, and with each other in a simulated professional setting. This communication may include discussions of culture and religion, perhaps allowing students and faculty to share their diversity and inform others about their cultural and religious values.

In the simulation, students and faculty from each profession have the opportunity to gain a better understanding of the roles and responsibilities of the various health care professionals that might be called upon to deal with pediatric end-of-life issues, as well as the importance of teamwork in such circumstances. Perhaps more importantly, such simulation activities demonstrate to students (and faculty) the need to support each other at such times and allow for grieving, the acknowledgement of feelings, and debriefing the processing of these feelings.

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