Original Review

Simulation: A New Approach to Teaching Ethics

Margaret Buxton, CNM, MSN, Julia C. Phillippi, CNM, PhD, Michelle R. Collins, CNM, PhD

The importance of ethical conduct in health care was acknowledged as early as the fifth century in the Hippocratic Oath and continues to be an essential element of clinical practice. Providers face ethical dilemmas that are complex and unfold over time, testing both practitioners' knowledge and communication skills. Students learning to be health care providers need to develop the knowledge and skills necessary to negotiate complex situations involving ethical conflict. Simulation has been shown to be an effective learning environment for students to learn and practice complex and overlapping skills sets. However, there is little guidance in the literature on constructing effective simulation environments to assist students in applying ethical concepts. This article describes realistic simulations with trained, standardized patients that present ethical problems to graduate-level nurse-midwifery students. Student interactions with the standardized patients were monitored by faculty and peers, and group debriefing was used to help explore students' emotions and reactions. Student feedback postsimulation was exceedingly positive. This simulation could be easily adapted for use by health care education programs to assist students in developing competency with ethics.
J Midwifery Womens Health 2014;00:1–5 © 2014 by the American College of Nurse-Midwives.

Keywords: education, ethics, midwifery, simulation

INTRODUCTION

Ethical conduct is an essential facet of health care practice. Providers face ethical dilemmas that are complex, unfold over time, and result from the direct conflict of multiple ethical principles.[1] Implementation of ethics in practice requires knowledge of ethical concepts, moral reasoning, critical thinking, strong communication skills, and the ability to quickly to integrate multiple sources of information.[1]

Ethics is a foundational component of all health care.[2] Professional organizations, including the American College of Nurse-Midwives (ACNM), require education programs to ensure that new graduates are knowledgeable about health care ethics.[3] The ACNM Code of Ethics states that certified nurse-midwives (CNMs) and certified midwives (CMs) have 3 ethical mandates that reflect responsibilities to the woman, the public good, and the profession.[1] The ACNM Code of Ethics requires CNMs/CMs to act ethically in all professional settings. However, in practice ethical dilemmas evolve in the course of conversations, and successful resolution often involves both knowledge and communication skills that are difficult to assess in a classroom setting. This article describes an innovative use of interactive simulations to help midwifery students apply ethical principles in practice.

TEACHING AND LEARNING ENVIRONMENTS FOR ETHICS

A common approach to teaching ethics has been case review and discussion.[4] Faculty present a discrete scenario or case to students who are encouraged to discuss and explore complex ethical questions based on the case. With classroom case-based teaching, students state to their peers what they would do in a situation; however, in clinical practice ethical dilem-

mas tend to unfold over time, and they test the practitioner's communication skills as well as ethical knowledge. Implementing ethical principles may be easier in a classroom setting when the problem is fictitious and straightforward.[4] A more realistic setting than the classroom may assist learners in moving from comprehension to application.[5]

Simulations have been shown to provide a safe environment for students to engage with, and be immersed in, course content that realistically mimics clinical practice.[5,6] Medical and nursing educators have explored many different applications of simulation to assist learners in mastering critical components of clinical care.[7] However, there are few published examples of the use of simulation for the teaching of ethics in nursing, medical, or midwifery literature.

Simulation allows learners to practice and demonstrate competence in areas involving knowledge, skills, critical thinking, and communication.[8] There are many types, ranging from low-fidelity simulation to high-fidelity simulation. It can use mannequins or people to create a learning environment that mimics clinical practice. Standardized patients are actors who use standardized scripts to interact with students and create a planned and nearly uniform learning experience. Standardization allows students to have a prepared experience and can allow faculty to evaluate responses against competency criteria.[5] An important component of simulation is self-reflection.[5] Ideally, this time of self-reflection is facilitated to encourage an accurate self-assessment and future implementation of learning. Standardized debriefing provides prompts to guide the student and inspire critical assessment and planning for future encounters. Students can debrief immediately following the completion of simulation; or the encounter can be recorded and watched at a later time to create distance from immediate emotions as well as to encourage deeper self-assessment. While simulation can be used as a means of evaluating students, the stress of evaluation may decrease the acquisition of new skills. In addition, inclusion of evaluation may decrease student trust and impair honest student self-reflection and discussion about performance.[9]

Address correspondence to Margaret Buxton, CNM, MSN, Vanderbilt Nurse-Midwifery Faculty Practice, Vanderbilt University School of Nursing, 2611 West End Ave, Nashville, TN 37203. E-mail: margaret.buxton@vanderbilt.edu

◆ The American College of Nurse-Midwives Code of Ethics requires that certified nurse-midwives and certified midwives act ethically in all professional settings.

◆ The Core Competencies for Basic Midwifery Practice require new graduates to have an understanding of bioethics related to the care of women, newborns, and families.

◆ Simulation provides a safe and vibrant learning environment to assist midwifery students in learning and applying ethical principles to clinical care.

SIMULATION FOR THE TEACHING AND LEARNING OF ETHICS

Using the ACNM Code of Ethics, the current literature on simulation, and curriculum design principles,[5] the primary author developed a list of essential ethical concepts for students. The ACNM Code of Ethics outlines 11 distinct moral obligations specific to the practice of midwifery that further describe the relationship to the woman, the public good, and the profession.[1] These moral obligations are embedded with universal ethical concepts that include respect for autonomy, beneficence (to do good) and nonmaleficence (to prevent harm), respect for justice, competence, and respect for human dignity.[1] In addition, midwives must maintain a high level of professional integrity as per national, state, and facility guidelines.[1]

The cases for this simulation reflect that clinical scenarios may challenge a clinician's moral obligations in more than one way. The intersection of these competing moral obligations achieves the case complexity that creates the dilemma for the student. The 4 cases were produced using details from actual clinical patient encounters. Cases are outlined in Table 1. Once the key portions of the cases were developed, a script and a set of if/then statements were developed to guide the standardized patients in their interactions with the students. For instance, the instructions read, "*If the student asks you to come into the clinic before writing a prescription, then* comment on your need for privacy." Pertinent readings were selected to prepare students for the encounters.[1,10–12] While the simulations were constructed to enhance student learning, institutional review board approval was obtained to allow for dissemination of the findings.

Ethics had been discussed in several courses throughout the curriculum. The students had previously been introduced to ethical concepts and the ACNM Code of Ethics, and they had some readings on ethics just prior to the simulation experience. However, previous teaching and discussions focused on a narrow area of practice, consistent with the course content, while the faculty felt that students needed to depart from the education program with a realistic understanding of the complexity of ethical conduct. The faculty determined that the simulation of complex ethical dilemmas was best placed within the curriculum immediately prior to the student's final clinical semester. By this point in the program, each student had experience providing care to women with a variety of gynecologic, primary care, and pregnancy-related concerns, and was familiar with normal clinic routines. After students

completed the simulation, they would have an additional semester to apply these concepts to clinical care and achieve the ethical competencies outlined in the ACNM Core Competencies.[3] In addition, the timing within the curriculum allowed faculty to mentor students who struggled with the content without causing a delay in their clinical progression. The simulation was not linked to a formal evaluation; points were awarded for active participation.

The simulations were held in a simulation facility designed to mimic a clinic setting. A series of clinic rooms included an examination table and a chair. The rooms were wired with 2 cameras and a microphone connected to computers in another room. In addition, one-way glass and headphones allowed an observer in the hallway to see and hear the simulation. This allowed the student and standardized patient to be alone in the examination room but easily observed.

Prior to the encounters, students were paired; one student became the provider and interacted with the standardized patient in the examination room while the other student observed from the hallway. Faculty paired the students to avoid friends being placed together; this decreased bias and enhanced professional communication and critical feedback. Each student participated in 4 cases: as the provider for 2 cases and as the observer for 2 cases. Allowing students to switch roles enhanced reflection and prevented extroverted students from marginalizing their introverted colleagues. There were 4 total standardized patient scenarios, also known as cases, and each scenario occurred 4 times. Approximately 20 students participated in all scenarios in one day. For each of 3 cases, 3 standardized patients were trained, and faculty were the standardized patients in the fourth case, which involved a telephone request for sleeping medication from a higher-ranking colleague.

After the students were paired and led to the appropriate simulation room, a brief door note oriented them to the type of visit. Pertinent physical examination details were included to cue the students that a physical examination was not the focus of the encounter (eg, vital signs, fundal height, and fetal heart tones were provided for the scenarios with pregnant patients). Following this brief orientation, the student provider entered the room to interact with the standardized patient.

Debriefing

Debriefing took place in several stages. Following each simulated patient encounter, students had an initial debriefing time

Table 1. Clinical Scenarios for Ethical Simulation

Scenario	Ethical Principles
A senior colleague calls on the phone to request zolpidem (Ambien) for sleep after a difficult birth. However, the practitioner who she calls has never seen her for a visit in the clinic.	Justice Professional Integrity
A multiparous woman in her third trimester with gestational diabetes has not had consistent prenatal care and is unwilling to answer questions about her blood glucose or the management of her diabetes, even though her fetus is at risk.	Autonomy Beneficence Nonmaleficence
A woman presents with a chief concern of migraines and requests narcotics. She gives a complex history of her socioeconomic problems and lack of health insurance. She declines consultation with other providers related to cost and lost work. She plays on the practitioner's sense of compassion to help her so she can continue working to provide for her family.	Justice Autonomy Professional Integrity
A multiparous woman with a term infant attempts to enlist the help of the practitioner for a vaginal breech birth in a level I hospital. The consulting physician has already recommended a primary cesarean as she and the hospital are not well-prepared to support vaginal breech birth.	Autonomy Beneficence Nonmaleficence Professional Integrity

with their peer, who was observing from the hallway (peer debrief). Following completion of 2 scenarios, students completing the same cases met for 15 minutes to debrief together in a group of 10 to 12 (small group debrief 1). Following the final 2 cases of the day, the same small debriefing groups met to discuss those cases (small group debrief 2). A final full-group debrief was completed at the end of the day with all of the students (full group debrief).

At the end of the time allotted for each individual encounter, the standardized patient left the room, and the observer student came in to meet with the student who had acted as the practitioner (peer debrief). The students were provided with written instructions on how to spend the next 10 minutes. First, the student who interacted with the standardized patient was to spend approximately 5 minutes discussing that interaction and personal emotions about the experience. The observer was to spend 5 minutes sharing personal thoughts about that interaction and the performance of the practitioner student. Immediately following the peer debrief, the students switched roles and began another standardized patient encounter.

Faculty were assigned to observe the encounters for a small subset of the entire group. While it was not possible for faculty to watch each encounter in its entirety because 4 encounters were occurring simultaneously, faculty were able to use computers to switch between the different encounters. This allowed faculty to observe the students and note valuable comments and observations for debriefing. All rooms observed by a single faculty member were within the same small debriefing group. Observation of the rooms within the debriefing group allowed the faculty to gain a sense of the whole of the interactions, understand overall student strengths and weaknesses, and plan for the group debriefing session.

After students participated in 2 cases, they gathered together for a group debriefing facilitated by a faculty member (small group debrief 1). Faculty began the interaction by discussing the need for a safe space for emotion and reflection and stressing that students were not being graded; rather, they were to use the debriefing session to

learn. Faculty led the debriefing with open-ended questions and encouraged comments about emotion and performance. After this initial discussion, the faculty facilitated a discussion of ethical principles and encouraged students to share what they thought were appropriate responses to the ethical dilemmas, even if different than their initial responses to the standardized patient. Following a discussion of appropriate responses, faculty mentioned notable student-standardized patient interactions without targeting individual students in order to stimulate a more in-depth discussion of common pitfalls in clinical dilemmas.

The debriefing sessions brought out a vibrant array of emotional responses and student comments. Students were able to hear that their colleagues had experienced similar struggles. Students expressed that they had to carefully navigate between what they felt was appropriate and the needs of the patient. In other scenarios, they felt manipulated or pressured by the standardized patient to make a decision that they knew was not ideal. Students who felt they had handled the situation well were able to share their experiences and assist others in exploring alternate actions for dealing with the particular ethical problem. The scope of practice and drug-seeking cases generated the most depth of conversation and discussion because they invoked strong emotions from the students. This process was repeated after the second 2 cases (small group debrief 2).

At the end of the day, when all students had completed the 4 cases, students gathered as a larger group to discuss the experience (full group debrief). At the beginning of the full group debrief, the faculty who had been the drug-seeking standardized patients came into the room and apologized for their well-acted manipulative behavior. They made eye contact with the students with whom they had spoken on the phone in order to dissipate any residual tension from the phone call. Students were allowed to discuss their emotions from the day and share their experiences. Then the entire midwifery faculty facilitated a larger exploration of ethics in clinical practice. Students brought up other ethical dilemmas that they had encountered in clinical rotations, and faculty validated the many approaches to solving ethical

dilemmas—including the use of institutional ethics boards, quality assurance committees, and colleague support.

After validating student experiences, faculty described how the debriefing process was an example of a healthy use of collegial support consistent with the hallmarks of midwifery.[3] The benefits of collegial discussion, while protecting patient privacy, were contrasted with the stress and risk involved with making a difficult ethical decision in isolation. Students were encouraged to continue the dialogue of ethical dilemmas with their integration preceptors and midwife colleagues after graduation, as long as patient confidentiality was protected.

Student Evaluation of the Simulation and Debriefing

Following the day of simulations, students were asked to complete an online evaluation using their secure course platform, developed by BlackBoard (Washington, DC). The evaluation targeted student confidence, adequacy of the orientation, and the perceived benefit of the debriefing process. It also included several short-answer questions that allowed the students to narrate what they liked or did not like about the simulation. The tool was developed by faculty prior to the simulation and tailored to the simulation experience. It had not been previously tested for validity and reliability. Participation in the online evaluation was optional, and the results were available to faculty only in aggregate.

Student response to the ethics simulations was overwhelmingly positive. When asked what surprised them the most about the experience, students responded with comments about how surprised they were at the difficulty of the interactions. One student noted, "[I realized] how terrible it feels when a patient is upset with you/you cannot meet their perceived need." When students were asked to reflect on what they believed they did well, one student commented on the scope of the practice case: "In the scenario where I had to deal with the coworker asking for Ambien, I felt that I stuck up for myself adequately and was not afraid to state the fact that I felt I was being bullied because of my new position at the practice."

The simulation was intended to be a formative experience. The in-depth exploration of ethics in midwifery practice, prior to the student's final clinical rotation, would enhance their ability to perform and self-reflect when faced with ethical problems, seeking the guidance of faculty and preceptors as needed. Student comments on the evaluation and during the debriefing sessions demonstrated their understanding of key ethical concepts.

DISCUSSION

Simulation allowed the students to implement ethics in practice and to develop communication skills needed in negotiating complex patient situations. When compared to classroom learning, the rich simulation environment allowed students to experience how ethical dilemmas affect clinicians mentally, physically, and emotionally. The effect of the simulation on the students exceeded our expectations.

The use of a simulation center and the hiring/training process of standardized patients did have an expense; however, costs could be decreased if faculty used volunteer standardized patients (retired clinicians, student alumni, or nurse-midwifery faculty) and/or set the simulation in a clinic after hours. While this simulation center had integrated technology for student observation, portable cameras or smartphones can be used for visualization of the student-standardized patient encounters.

This ethical simulation helped students synthesize their knowledge, skills, and behaviors in a safe setting that promoted confidence and allowed for the exploration of communication techniques. We believe that the use of simulation in teaching and learning ethics has tremendous potential for enriching students' understanding of ethical concepts and encouraging ethical conduct in practice.

AUTHORS

Margaret Buxton, CNM, MSN, is Co-Director of the Vanderbilt Nurse-Midwifery Faculty Practice, an Instructor at Vanderbilt University School of Nursing, and provides full-scope midwifery care in the faculty practice.

Julia C. Phillippi, CNM, PhD, FACNM, is Assistant Professor of Nursing at Vanderbilt University School of Nursing, teaching in their MSN and DNP programs and providing intrapartum care in their faculty practice.

Michelle R. Collins, CNM, PhD, FACNM, is Associate Professor of Nursing at Vanderbilt University School of Nursing, where she is Program Director of the Nurse-Midwifery program and practices full-scope midwifery care in the faculty practice.

CONFLICT OF INTEREST

The authors have no conflicts of interest to disclose.

REFERENCES

1. American College of Nurse-Midwives. *Code of Ethics*. Silver Spring, MD: American College of Nurse-Midwives; 2008.
2. Poikkeus T, Numminen O, Suhonen R, Leino-Kilpi H. A mixed-method systematic review: Support for ethical competence of nurses. *J Adv Nursing*. 2013; 70(2):256-271.
3. American College of Nurse-Midwives. *Core Competencies for Basic Midwifery Practice*. Silver Spring, MD: American College of Nurse-Midwives; 2012.
4. Thiel CE, Connelly S, Harkrider L, et al. Case-based knowledge and ethics education: Improving learning and transfer through emotionally rich cases. *Sci and Eng Ethics*. 2013;19(1):265-286.
5. Rutherford-Hemming T. Learning in simulated environments: Effect on learning transfer and clinical skill acquisition in nurse practitioner students. *J Nurs Educ*. 2012;51(7):403-406.
6. Cohen SR, Cragin L, Wong B, Walker DM. Self-efficacy change with low-tech, high-fidelity obstetric simulation training for midwives and nurses in Mexico. *Clin Sim Nurs*. 2012;8(1):e15-e24.
7. Cooper S, Cant R, Porter J, et al. Simulation based learning in midwifery education: A systematic review. *Women Birth*. 2012;25(2):64-78.

8. Bensfield LA, Olech MJ, Horsley TL. Simulation for high-stakes evaluation in nursing. *Nurse Educ*. 2012;37(2):71-74.

9. Fanning RM, Gaba DM. The role of debriefing in simulation-based learning. *Simul Healthc*. 2007;2(2):115-125.

10. Barth WH, Kwolek CJ, Abrams JL, Ecker JL, Roberts DJ. Case 23–2011: A 40-year-old pregnant woman with placenta accreta who declined blood products. *New Engl J Med*. 2011;365(4):359-366.

11. Schorn MN. Midwives' practices and beliefs about discharging clients from their practice. *J Midwif Womens Health*. 2007;52(5):465-472.

12. American College of Obstetricians Gynecologists. ACOG committee opinion. Surgery and patient choice: The ethics of decision making. *Obstet Gynecol*. 2003;102(5 Pt 1):1101-1106.