Features

The Effectiveness of Standardized Patient Simulation in Training Hospital Ethics Committees

David Y. Harari and Robert C. Macauley

ABSTRACT

Clinical simulation using standardized patients has become standard in medical education—and is now being incorporated into some graduate programs in bioethics—for both formative and summative evaluation. In most hospitals, though, clinical ethics consultation is done by the ethics committee (or a subset of it). This study is the first, to our knowledge, to examine the effectiveness of standardized patient simulation in training hospital ethics committees to deal with ethically complex and emotionally fraught clinical situations. Following a substantial revision of the institution's nonbeneficial treatment policy, ethics committee members underwent a simulation to determine whether a specific requested treatment should be withheld on the basis of futility. Pre- and post-intervention surveys showed improvement in all domains, although the small sample size limited the power of the study, with only one measure showing a statistically significant difference. An interesting incidental finding was that one-quarter of committee members voted against a determination of futility, even though the case clearly met the definition set forth in the policy. This highlights the emotional challenges in implementing an ethically rigorous, unanimously accepted policy that ultimately determines the timing and manner of a patient's death.

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INTRODUCTION

Clinical ethics consultants and committees are called upon to facilitate the resolution of complex moral dilemmas that arise within the hospital setting.[1] The very nature of clinical ethics thus requires consultants and committee members not only to be skilled in identifying, analyzing, and exploring moral and clinical issues in abstraction, but also equally adept at mediating, negotiating, and facilitating meaningful dialogue between all participants. As such, clinical ethics is a relational discipline that demands proficiency in interpersonal skills and effective means of communication. These interpersonal skills may include elements of active listening, providing clarity, and articulating competing viewpoints, as well as other forms of nonverbal communication. Such skills are now recognized as core competencies by major clinical ethics associations and governing bodies.[2]

One of the most challenging ethical issues—even among highly skilled communicators—is medical futility (alternately known as nonbeneficial treatment). Given that patients in these situations are often critically ill and treatments may carry signifi-

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cant burden, the emotional stakes can be extremely high. As a result, toward the end of the 20th century, as Helft, Siegler, and Lantos put it, "the concept of 'medical futility' was debated in the medical community with a vehemence that few philosophical concepts elicit."[3] Eventually the debate waned in the face of competing definitions of "futility,"[4] whether or not a treatment was "futile," and who—physician, administrator, ethics committee member, or the court—was responsible for the determination.[5]

The concept of nonbeneficial treatment has recently returned to the fore out of growing concerns about healthcare expenses,[6] the development of accountable care organizations,[7] and increasing attention to "choosing wisely."[8] For those institutions with a policy on responding to requests for nonbeneficial treatment, the matter of how to institute that policy—and, specifically, how to attend to patients and family members for whom a declaration of futility might literally be a question of life or death—is central.

Simulation has increasingly been used to prepare learners for complex, high-pressure, real-life situations. This is especially true in medical education, in which every respondent in a recent survey of U.S. medical schools reported using simulation at some point in the educational process.[9] Standardized patients (that is, healthy individuals trained to portray the roles of patients, family members, and others in realistic ways[10]) are often used to evaluate the skills of learners in undergraduate and graduate medical education.[11] Beyond assessment, standardized patients (SPs) also offer learners an opportunity to practice communication and interpersonal skills in a controlled environment. This is particularly crucial with regard to complex and emotionally charged issues frequently faced by clinical ethicists, such as advance care planning, physician-assisted dying, and organ donation.[12]

Recently, select graduate programs in bioethics have begun to use simulation to educate their students.[13] While these efforts have been directed toward future clinical ethicists, the majority of U.S. hospitals utilize ethics committees—not all of which have formally trained ethicists—to provide ethics consultations.[14] To our knowledge, there are no published reports on the use of SPs—for all their ubiquity in medical education—in the training of ethics committee members. (The relevant literature is limited to role playing by ethics committee members to gain a better understanding of ethical conflicts engendered by different values and principles.[15]) Given the increasing availability of SPs at academic medical centers, utilizing their talents in training ethics committees at affiliated hospitals would be a logical next step. This article describes the implementation and outcomes of just such a program.

BACKGROUND

In 2013, the University of Vermont Medical Center (a 500-bed academic medical center then known as Fletcher Allen Health Care) approved a new policy regarding nonbeneficial treatment (NBT). The previous policy had only permitted unilateral withdrawing/withholding of requested treatment in situations of "physiologic futility" (that is, when the requested treatment had no chance of achieving the stated goal), and thus was rarely invoked. The need to revise the policy became apparent in the aftermath of an especially troubling case of a patient who spent the last several months of his life in the intensive care unit (ICU).

Long after it became apparent to the care team that the patient would never leave the hospital, the patient's spouse continued to demand maximal treatment based on "the value of one more day." Full treatment accordingly ensued in the form of tracheostomy, mechanical ventilation, and enteral tube feeding. When the patient's bowel function no longer permitted the latter, however, the team reluctantly instituted total parenteral nutrition, based on the patient's wife's demand and in the face of significant risk for infection. The patient's code status was, however, unilaterally changed to DNR (do not resuscitate), since CPR (cardiopulmonary resuscitation) was deemed "physiologically futile" in the face of such overwhelming illness.

The patient eventually experienced cardiac arrest and was pronounced dead. Fortunately, the patient's wife did not follow through with her "threat" to begin chest compressions herself in the absence of the medical team performing CPR. In fact, she subsequently expressed her gratitude for the extent and quality of care provided to her husband. Many staff members, however, were deeply troubled by what they perceived as the suffering endured by the patient in the course leading up to his death, prompting reconsideration of the institution's "futility" policy.

The revised policy broadens the definition of "nonbeneficial" to include treatments that have "no realistic chance of achieving the medical goal of returning the patient to the level of health that permits survival outside of the acute care setting." This revision shifts the paradigm from one of physiologic futility to probabilistic ("no realistic chance") futility, and establishes a minimally acceptable goal (that

is, "survival outside the acute care setting"). The ability to merely prolong life within the ICU no longer qualifies a treatment as beneficial.

The revised policy also delineates a clear procedure for responding to requests for potentially nonbeneficial treatment, including a second opinion; attempted transfer to the care of a willing physician; consultations with clinical ethics, palliative care, social work, and risk management; and attempted transfer of the patient to an institution willing to provide the requested treatment. If these steps fail to overcome the impasse, the final step is a meeting with a five-member *ad hoc* subcommittee of the ethics committee, which will determine whether the requested treatment can be considered "nonbeneficial." If the consensus of the subcommittee is that the treatment is potentially beneficial, clinicians will be required to provide continued treatment. However, if the subcommittee determines that the treatment is nonbeneficial, no clinician in the institution will be permitted to provide that treatment.[16]

Recognizing that the revised policy represents a paradigm shift for the institution—as well as a new responsibility for the ethics committee, which previously has not been involved in NBT discussions—the ethics committee felt it was important to "pilot" the new policy in a context that would allow for personal feedback and fine-tuning of the policy, while also protecting distraught patients and family members from being exposed to a process of trial and error. For these reasons, the decision was made to simulate the process using SPs.

METHODS

A de-identified version of this case was the natural choice to simulate the new NBT policy for the ethics committee. Simulation was provided by the staff of the Clinical Simulation Laboratory, a collaborative effort of the University of Vermont College of Medicine, the University of Vermont College of Nursing and Health Sciences, and the University of Vermont Medical Center. The SPs employed by the Clinical Simulation Laboratory had extensive experience working with learners at several levels (from undergraduate medical and nursing students to attending physicians), but they had never before worked with the University of Vermont Medical Center Ethics Committee. Multiple meetings were required to brief the SPs on the context of the meeting and the respective roles they would be playing (that is, an ICU nurse, a respiratory therapist, and the patient's spouse and sister). A physician who had been involved in treating the patient on whom the scenario was based was enlisted to play that role in the simulation, given the degree of clinical knowledge required.

The ethics committee is made up of 24 members (one-third of whom must be members of the medical staff), divided into preventive and consultative subcommittees. Identical simulations were offered to members of both subcommittees. Members were provided a copy of the revised NBT policy (previously drafted and approved by their committee) as well as a summary of the clinical case. Prior to the simulation, they were also invited to take an anonymous survey of their knowledge of and comfort regarding the procedure of determining whether a treatment was nonbeneficial. (As the survey was anonymous and its primary purpose was to improve the quality of the NBT procedure, the study was determined to be "nonregulated activity" by the University of Vermont Medical Center Institutional Review Board.)

As delineated in the policy, the parties involved in the case (that is, one physician and four SPs) were ushered into the room as soon as the subcommittee members arrived. At the outset of the meeting, the physician reviewed the medical situation, clearly stating that there was "zero chance" that the patient would ever leave the hospital (thus fulfilling the policy definition of "nonbeneficial treatment"). The chair of each ethics subcommittee facilitated further discussion, seeking out the opinions of each of the SPs and allowing for dialogue and additional questions. Over the course of the discussion, it became apparent that some of the nonclinicians were struggling to apply the definitions of the policy to the case at hand, given the emotional anguish clearly communicated by the SPs who were playing the patient's spouse and sister. "One more day with him is enough for me," the SP playing the spouse said.

Some of the subcommittee members who were clinical ethics consultants also struggled with their modified role. For example, one consultant explicitly reassured the patient's spouse that "we're not here to tell you that you can't have these treatments"—a standard statement in the "ethics facilitation model" of ethics consultation[17]—whereas, in point of fact, that was exactly what the committee was tasked with determining. At the conclusion of the conversation, the physician and the SPs left the room to allow the subcommittee to confer and render a decision, as outlined in the policy.

In the week following the simulation, all participants were emailed an anonymous follow-up survey, which included the same seven questions of the pre-survey, as well as additional questions

regarding the quality/impact of the simulation. Free-text comments were also invited.

RESULTS

A total of 17 ethics committee members attended one of the simulations. Interestingly, despite the attending physician's explicit statement regarding zero potential for discharge, approximately three-quarters of the members (in each subcommittee) voted in favor of deeming continued intensive care as "nonbeneficial." The minority who supported continued treatment acknowledged that the treatment met the definition of "nonbeneficial," as stated in the policy (which they had approved in prior committee discussions); however, they questioned whether invoking the policy in this particular instance was worthwhile, given the entreaties of the patient's wife. One committee member went so far as to question whether committee review was even necessary, given the explicit definition put forth in the policy and the risk of raising the family's hopes that their request might yet be granted.

Of the 17 ethics committee members who attended one simulation, 15 completed a pre-survey and eight completed a post-survey. The survey responses were compared using independent samples *t*-tests with IBM SPSS Statistics version 22. Paired *t*-tests were not possible because of the anonymous nature of the surveys. The results are presented in table 1.

The post-survey included additional questions. Given the highly clinical nature of the discussion, participants were asked if having a clinical background made it easier to navigate through the dilemma (and, conversely, if not having a clinical background made it harder). Of note, all six clinicians felt their background made it easier, while neither of the nonclinicians responding to the post-survey felt their lack of clinical background made it harder.

The post-survey also asked about the most valuable learning points of the experience. Responses tended to focus on the verisimilitude of the simulation and the skills of the SPs. Representative survey responses included "EXCELLENT acting which brought the intangible feelings of the families into a reality," and "very excellent depiction of strongly held emotional positions." Capturing this sentiment, the physician playing the role of the attending exclaimed immediately upon conclusion of the first simulation: "That woman playing the patient's wife? She was Linda!" (Referring to the name of the actual patient's wife, changed here to protect her privacy.)

The final survey question sought input as to how to improve the educational experience. Suggestions included additional preparatory time to review the process as outlined in the policy, as well as additional time after the simulation to debrief. One participant, noting the importance of skillful facilitation, suggested enlisting an independent party to play this role in an actual meeting so as to allow

TABLE 1. Responses to pre- and post-simulation surveys (*N*=15), on a 7-point Likert scale, from strongly disagree to strongly agree

Statement	Pre-survey average	Post-survey average	*p* value
I have a thorough understanding of the definition of "nonbeneficial treatment."	5.67	6.00	0.50
I have a thorough understanding of the institutional procedures related to determining whether a treatment is nonbeneficial.	4.93	6.25	0.03
I have a deep appreciation for the emotional struggles patients and families face when a treatment they've requested may not be offered.	6.27	6.88	0.15
I have a deep appreciation for the challenges patients and families face in understanding the risks and benefits of certain medical treatments.	6.27	6.75	0.10
I have a strong sense of what the role of the ethics committee is in meeting with families and staff regarding nonbeneficial treatment.	5.60	5.75	0.79
I believe that the process laid out in the new policy is an appropriate and effective way to address requests for potentially nonbeneficial treatment.	5.93	6.00	0.88
I feel equipped to be a member of the *ad hoc* ethics subcommittee tasked with determining whether or not a requested treatment is nonbeneficial.	5.40	6.00	0.29

ethics committee members to focus on the question at hand.

DISCUSSION

The futility movement may have faded in the face of definitional and logistical challenges,[18] but concern regarding nonbeneficial treatment remains, often based on concerns of increased morbidity[19] as well as increased costs.[20] In response to these concerns, the University of Vermont Medical Caner revised its NBT policy, both in terms of definitions and procedures. To identify weaknesses in the process and to prepare the ethics committee for real-life application of the policy, SPs were used to simulate a determination of whether requested treatment could be considered nonbeneficial.

Ethics committee members' understanding, appreciation, and confidence trended upward in every measured domain as a result of the simulation, a finding that was corroborated by the overwhelmingly positive free-text comments (see table 1). The small sample size limited the power of the study, and thus only one element ("I have a thorough understanding of the institutional procedures related to determining whether a treatment is nonbeneficial") demonstrated statistically significant improvement. The very high pre-survey scores on most of the other elements also limited the range of potential improvement, which may help explain the lack of statistical significance for those questions.

The surveys also identified areas of potential improvement. The simulation format was new to many participants, and the verisimilitude of the simulation might have been intimidating compared to traditional round table discussions. This would explain the requests for additional opportunity to prepare and debrief, which in this case were limited by scheduling constraints. Given the complexity of the clinical context and the emotional angst displayed by the SPs, one respondent aptly identified the need for a skillful facilitator, especially one who was not involved in the committee deliberation. This idea had not arisen in the extensive discussions of the policy revision, but will be seriously considered when the policy is re-evaluated.

The fact that clinicians felt their background was helpful and nonclinicians did not feel at a disadvantage may reflect the thoroughness of preparation for the discussion and the understandability of the clinical summary provided by the physician at the outset. One might also wonder whether the aspects of their background that the clinicians felt were helpful might not be unique to physicians and nurses. Perhaps it was their experience grappling with challenging issues or managing complex emotions that was most helpful, and the nonclinicians in the group (social workers and patient advocates among them) were equally familiar with these experiences, albeit from a different vantage point. Alternatively, one might also wonder if denial or rationalization played some role, especially given the complexity of the clinical case and that the fact that the ethics committee's charter requires that one-third of the members belong to the hospital medical staff.

Perhaps the most interesting finding of the study was that after extensive discussion by the ethics committee of the proposed (and, subsequently, adopted) policy revision—as well as thorough preparation of the ethics committee for the simulation—one-quarter of the participants were unwilling to categorize the treatment in question as "nonbeneficial," even though it clearly met the definition as put forth in the policy. (And, thus, from a technical perspective, the question before the ethics committee was rather simple to answer.) Some might therefore criticize the case chosen for the exercise as being too cut and dry, given that it so explicitly fulfilled the policy's definition of "nonbeneficial treatment." However, that was the primary reason this case was chosen, not merely because it was the paradigmatic real-life case that led to the reformulation of the policy itself. Committee members need to not only thoughtfully listen to the concerns of family members and staff, but also be willing—should the circumstances justify it—to make the extremely difficult decision to refuse to provide a requested treatment. Members would likely benefit from a subsequent simulation that directly addresses the question of whether a treatment meets the definition of "nonbeneficial," but the initial session focused on whether they were prepared—in the face of profound personal and emotional implications for the patient and his family—to authorize withholding life-sustaining treatment.

That one-quarter of the ethics committee members voted against withholding treatment that they freely admitted met the definition of "nonbeneficial" highlights the profoundly human aspect of the deliberations. This is reminiscent of the opening scene in the movie *WarGames,*[21] in which a pair of U.S. Air Force officers receive a properly formatted order to launch a missile armed with a thermonuclear device. While the lieutenant is willing to "turn the key" to launch the missile, the captain is hesitant to do so in the face of such loss of life, demanding additional evidence that a mistake hasn't been made. An impassioned discussion follows about the need

to follow pre-established procedures, prompting the captain to explain, "Screw the procedure, I want somebody on the g*****n phone before I kill 20 million people!"

The scene concludes with the lieutenant pointing a gun at his superior and speaking in a clearly threatening tone: "Turn your key, sir."

The scene reflects the underlying truth that it is one thing to ratify a policy that could conceivably lead to even one human death (let alone 20 million); it is quite another to put that policy into practice, especially when confronted with the actual people your decision will affect. The simulated case underscores the human element that is inherent in a determination of whether a treatment is nonbeneficial, which plays just as important a role as a thoughtfully crafted definition. (And which may be another reason for the "fall of the futility movement,"[22] for all its rational analysis.) Certainly, one could sensibly disagree on ethical grounds with the revised policy, but the fact that the same people who voted against applying the policy had earlier participated in crafting it—and had voted unanimously to adopt it—suggests that the basis of the disagreement was primarily emotional, rather than ethical.

This, in turn, raises the deeper question of the necessity—or even utility—of involving an ethics committee in the process. At least for the simulated case, the outcome should have been clear prior to any deliberations, based on the medical opinions of the attending physician and consultant and the definition of "nonbeneficial" outlined in the policy. One might reasonably argue that a checklist composed of required steps would be more efficient in adjudicating a determination of "nonbeneficial treatment," in much the same way that the U.S. Air Force, in the movie *WarGames*, fully automated its missile silos after noting the extent of human hesitation to initiate thermonuclear war.

On the other hand, human involvement may provide an essential check on the use of the "nonbeneficial" checklist, which otherwise might become a one-size-fits-all process. Just because a treatment is deemed "nonbeneficial" doesn't mean it is in the best interest of the patient, family, or medical team to limit it. In *WarGames,* the Air Force opts to automate missile launch to prevent any possible human interference; but later, when the controlling software is hacked, the program comes terrifyingly close to automatically initiating nuclear war. Amid the complexities of the futility debate, we should never lose sight of the injunction, "first, do no harm."

The final point to be made has to do with the feedback loop between education and training on the one hand, and quality improvement on the other. While the primary purpose of this simulation was to prepare ethics committee members to effectively implement the new NBT policy, the results of the study identified areas in which the policy itself could be improved. Specifically, additional time for preparation and debriefing should be built into the process, and consideration should be given to using an independent, skilled facilitator. This would allow every ethics committee member to focus on the deliberations—rather than the designated chair having to attend to group process—and also ensure that the meeting fully attends to the needs of any family members who are present. The findings of the study suggest not only additional factors in implementation of the policy, but also the potential for improvement of the policy itself through thoughtful modification.

The limitations of this study include its power, since the respondents by definition had to be members of the ethics committee. Consequently, while all seven questions showed increasing trends following the simulation, only one was statistically significant. In addition, the generalizability of the study is limited because it involved the ethics committee of only one institution, applying a very particular policy that may not reflect the culture or philosophy of other institutions.

Nevertheless, this study suggests that the novel use of standardized patients in the education of ethics committees can be practical and beneficial. With the increased utilization of SPs in both undergraduate and graduate medical education, ethics committees will increasingly have access to this unique educational resource. Further investigation is necessary to evaluate the generalizability of this method to other institutions and settings, and to identify areas beyond questions of nonbeneficial treatment (such as families who refuse to accept a diagnosis of brain death, or cling tenaciously to the possibility of a miracle), in which clinical simulation might prove valuable.

MASKING OF THE CASE

Details of this case have been altered to protect the patient and family.

NOTES

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on core competencies and emerging standards from the American Society for Bioethics and Humanities' core competencies update task force," *American Journal of Bioethics* 13, no. 2 (2013): 3-13; V. Larcher, A.M. Slowther, A.R. Watson, and U.K. Clinical Ethics Network, "Core competencies for clinical ethics committees," *Clinical Medicine* 10, no. 1 (2010): 30-3.

3. P.R. Helft, M. Siegler, and J. Lantos, "The rise and fall of the futility movement," *New England Journal of Medicine* 343, no. 4 (2000): 293-296.

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6. T.N. Huynh et al., "The frequency and cost of treatment perceived to be futile in critical care," *JAMA Internal Medicine* 173, no. 20 (2013): 1887-94.

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13. W. Shelton, "Teaching graduate students the ASBH core skills of communication and interpersonal skills through mock consultations," *Bioethics Today* (2014); K.B. O'Reilly, "Ethics consultants get doses of realism through simulation," *American Medical News* (2008).

14. E. Fox, S. Myers, and R.A. Pearlman, "Ethics consultation in United States hospitals: a national survey," *American Journal of Bioethics* 7, no. 2 (2007): 13-25.

15. A.L. Rostain and M.C. Parrott, "Ethics committee simulations for teaching medical ethics," *Journal of Medical Education* 61, no. 3 (1986): 178-81; J.A. Jacobson and P.J. Foubert, "A dramatic approach to healthcare ethics committee education," *HEC Forum* 6, no. 6 (1994): 329-54.

16. There are several reasons for this institutional prohibition on another clinician providing the requested treatment. First, transfer of care to another physician is a much smoother and less contentious solution to the clinical impasse, and should have occurred long before an ethics committee review. (Indeed, the stepwise process requires prior thorough exploration of transfer to another clinician, and thus the question of whether such a transfer is even possible should be moot by the time the ethics committee becomes involved.) Second, failure to extend the restriction on providing treatment deemed after such extensive review to be nonbeneficial risks indefinitely prolonging the process by not providing definitive closure, thus rendering a futility policy itself "futile." Lastly, there are established precedents for such an institution-wide restriction. "Model policy on non-beneficial treatment," *http://www.thaddeuspope.com/images/Model_Policy_ on_Non-beneficial_Treatment_San_Diego_County_Medical_Society.pdf.*

17. M.P. Aulisio, R.M. Arnold, and S. J. Youngner, "Health care ethics consultation: Nature, goals, and competencies," *Annals of Internal Medicine* 133, no. 1 (2000): 59-69.

18. Helft, Siegler, and Lantos, "The rise and fall of the futility movement,"see note 3 above.

19. Bulger et al., "Choosing wisely in adult hospital medicine,"see note 8 above.

20. Huynh et al., "The frequency and cost of treatment perceived to be futile in critical care," see note 6 above.

21. J. Badham, dir., *WarGames,* United Artists, 1983.

22. Helft, Siegler, and Lantos, "The rise and fall of the futility movement,"see note 3 above.