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ETHICS CASE

How Should Complex Communication Responsibilities Be Distributed in Surgical Education Settings?

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Abstract

Part of any trauma surgeon's job is communicating effectively in difficult, often time-limited, situations. The ability to effectively discuss topics like goals of care in these settings has a direct effect on patient care. Many factors contribute to the complexity of these conversations, including patient, physician, surrogate, and system-specific factors. In responding to the case of Mr. D and Dr. J, we attempt to outline and analyze some of the moral challenges and ethical questions that this professional responsibility poses to trauma surgeons and trainees.

Case

Mr. D is a 19-year-old man severely injured after his motorcycle collided with oncoming traffic. He was not helmeted—either because his helmet came off or because he was not wearing one—at the time of the collision. He was unresponsive and intubated at the scene. Initial trauma workup reveals a Glasgow Coma Scale score of 3T, indicative of severe traumatic brain injury, although he received no medications from emergency medical service professionals in the field or while being transported to the emergency department. After being initially stabilized in the trauma bay, Mr. D was transferred to the surgical intensive care unit (SICU). A head computerized tomography (CT) scan obtained just prior to transfer reveals significant intracranial trauma including multiple foci of intracranial hemorrhage, mild midline shift (movement of the brain or part of the brain past its center line), and a moderate-sized subdural hematoma. Aside from his severe intracranial injuries, Mr. D has no major intrathoracic or intra-abdominal injuries. He continues to be unresponsive to noxious stimulation but has pupillary constriction, and he is breathing spontaneously on the ventilator, indicating exceedingly poor brain function but not brain death.

Dr. J is the second-year resident physician in the SICU who performed Mr. D's initial neurosurgical examination and is taking care of him. Dr. J has spoken with Dr. S, the chief neurosurgical resident, about Mr. D's poor prognosis. Based on Dr. S's assessment, Mr. D suffered devastating intracranial injuries and has little hope for meaningful recovery. Dr. J and Dr. S discuss Mr. D's case and consider whether a decompressive craniectomy (a partial skull removal that would allow expansion of a swelling brain) would help him.

After further deliberation, however, they agree that it would probably not. No surgery is planned, and Dr. S plans to talk to the attending physician about Mr. D in the morning.

At 2 a.m., Mr. D's mother, father, siblings, and extended family arrive. His bedside nurse asks Dr. J to provide Mr. D's family with an update and escorts Mr. D's family to the conference room. Dr. J has never led a discussion with a patient's family about the goals of care, and she hesitantly agrees to meet with Mr. D's family. Dr. J clarifies that it is likely that Mr. D's injuries will result in brain death. "Brain death?" Mr. D's mother asks as she begins to weep, "What's that?" Dr. J ponders how to explain brain death to the grieving mother. Then Mr. D's father, who introduces himself as a family practice physician, asks Dr. J if there is anything the team can do to save his son. He has heard about decompressive craniectomy helping "brain-injured" patients and asks whether this procedure can be done. Dr. J states that she and Dr. S considered it and agree that this procedure would not benefit Mr. D. Mr. D's father then asks, "And your attending physician agrees?" Dr. J wonders how to respond.

Commentary

The case of Mr. D. and Dr. J highlights some relevant issues in ethical communication and surgical education. Communication is a professional duty of all physicians. McCullough notes that sound, trustworthy information is a patient right [1]. Dr. J has never led a family discussion about goals of care and is understandably hesitant. However, she is correct in proceeding with the family update despite never having done it before. Alternatively, she could call her attending physician (who presumably is not in the hospital) to come in and have the goals-of-care discussion with Mr. D's family. This would have left Mr. D's family sitting at the hospital, maybe even at their son's bedside, without any update or information for an extended period of time. Given the nature of the patient's injuries, progression to brain death prior to the arrival of the attending physician is also possible. In this case, it is important to have the goals-of-care discussion as soon as possible. Dr. J's inexperience, combined with her respect for surrogate autonomy, presents a dilemma for Dr. J and the potential for missteps in communication.

Factors in Poor Communication

Communication, in and of itself, is not really an ethical issue. When effective, it can be a vehicle that facilitates good ethical decision making. Unfortunately, the opposite is true as well. Poor communication can lead to ethical dilemmas and poor ethical decision making. The reasons for poor communication in end-of-life care are multifactorial [2, 3]. Patient, physician, surrogate, and system-specific factors are all contributors to the complexity of the communication.

Patient factors. A few patient-specific factors are relevant, and chief among these factors is the sudden, severe nature of a patient's injuries. Such injuries result in loss of patient

decision-making capacity, a major factor in the complexity of communication. The patient's pre-injury state of health, the patient's value system, and what the patient would consider an acceptable quality of life are also significant contributors. In this case, none of these contributing patient factors is known, although it can be assumed that Mr. D was most likely healthy since he was 19 years old and riding a motorcycle. Previously healthy patients who suffer catastrophic injuries that will significantly alter their quality of life will likely have perspectives on quality of life that are very different from those of chronically ill patients who sustain similar injuries. Each of these cases presents different communication challenges.

Physician factors. There are numerous physician-specific factors that affect communication in these kinds of situations, and this case highlights two of them: relevant experience in discussing end-of-life issues and the ability to impart pertinent information. Dr. J lacks clinical experience but also experience in holding difficult conversations. It is important for her to provide clear medical information about the total injury burden and prognosis. Dr. J recognizes the need for input from a more experienced surgeon such as Dr. S, the neurosurgery chief resident. The information exchanged between Dr. J and Dr. S was useful because it included information that any meaningful discussion about goals of care requires, including specifics of the injury and current condition, the patient's prognosis, and treatment options [3]. The end result of this conversation between these two residents is that surgery is not an option for this patient. Unfortunately, this same conversation does not take place with the neurosurgery attending physician in order to verify that this is the best course of action for this patient. This failure to close the loop presents both moral and medicolegal issues that are related more to the medical training paradigm than to communication or end-of-life care. Suffice it to say that a decision as consequential as the decision to operate (or not operate) ideally should be vetted by an attending surgeon. In situations in which the decision to operate is closely linked to decisions regarding end-of-life care, it becomes absolutely essential to have the attending surgeon confirm the plan. In this case, Dr. J should confirm the plan with the attending surgeon by phone rather than deferring the conversation until the surgeon arrives in the morning.

Surrogate factors. Surrogate decision-maker factors are also some of the most challenging ones in difficult conversations. Surrogates are often unprepared to be thrust into the role of decision maker. They may have little or no knowledge of the patient's desires regarding advance directives. This is especially true of younger patients and trauma patients like Mr. D. Emotions are a tremendously important factor to consider in these conversations. They affect surrogates' ability to think and process information as well as their ability to make decisions. Surrogate cognitive ability and familiarity with the medical environment can be important factors to consider as well. In this particular case, the experience of Mr. D's father as a family physician is an important detail for Dr. J to consider. The mature practitioner who leads these discussions recognizes that these

factors can be helpful or harmful in these conversations. Using some medical terminology in conversation can give the false impression of medical literacy that can easily be misinterpreted by treating physicians. Therefore, communication expertise involves developing skills to confirm that information is understood correctly while simultaneously facilitating a natural and open flow to the conversation. As a physician inexperienced in leading difficult conversations, Dr. J should focus on the immediate issue, which is the goals-of-care conversation. She should proceed using language that is clear and easy for all members of the family to understand.

System factors. There is a pair of system-specific barriers to effective communication that are present in this scenario: time constraints and inexperience of the on-call team. When Mr. D's family arrives, it is appropriate to provide them with an update on their son's condition even though it is the middle of the night. Ideally, the attending physicians for the SICU and the neurosurgery team would lead this conversation. But, in this case, waiting until morning would likely worsen the fears and anxieties of Mr. D's family and would delay communicating critical information that is already available. Unfortunately, it is one of the realities of trauma and surgical critical care that resident-led family meetings are both unavoidable and essential. This fact points to the need for intentional education for surgical trainees in this key area. Junior residents themselves acknowledge much more anxiety than senior residents when faced with having difficult conversations with patients or families [4]. This anxiety is often related to uncertainty about the patient's diagnosis or prognosis [5].

Communication Education for Trainees

The need for formalized and intentional education of trainees in this particular area has been recognized across medical specialties [4-11]. To date, no large-scale studies on communication skills training for difficult conversations has been performed, but smaller studies show promising results [5, 9-11]. Simulation and case-based discussion modules have both been described in the literature [5, 6, 9-11]. A well-rounded training model in this area likely requires a multifaceted approach with a tiered progression of responsibility. Didactic lectures, simulations, and case-based discussions should provide a good foundation. On clinical services, though, a tiered progression of trainee responsibility seems most logical. Initially, this would likely begin with observation of attending surgeons and senior residents adept at this type of communication. Then partial participation, likely starting conversations with less severely ill patients, can occur under direct supervision. Ideally, this training would progress to more involvement of the trainee as competency is demonstrated, culminating with the trainee leading a discussion about severely ill patients with family or surrogates, again under adequate attending supervision. This tiered progression of responsibility would equip the resident physician to independently lead difficult conversations before being thrust into a difficult situation, as in this case, because of the attending physician's absence.

A key component of this approach is defining the core communication competencies for leading difficult conversations. At present, there is no widely accepted standard. A number of authors have attempted to define these competencies in a series of small trials and in recommendations based on expert consensus [2, 3, 6, 11]. Table 1 shows a list of suggested core competencies adapted from these publications. Demonstrating competency in conducting difficult conversations requires skill in both verbal and nonverbal communication. Specific components integral to verbal communication include clear transmission of information, appropriate empathic acknowledgment, and providing the opportunity to ask questions. Nonverbal skills are also essential to reflect the importance of the conversation, to demonstrate reflexive listening, and to provide appropriate emotional support.

Table 1. Core Competencies for Leading Difficult Conversations [2, 3, 6, 11]

Nonverbal skills
Chooses an appropriate location for meeting Sits down with family Makes good eye contact Uses good posture and body language Demonstrates care and concern through tone of voice and pace of conversation Allows some silence for family to absorb information Uses reflexive listening skills
Verbal skills
Leads introductions of all parties present (clinicians and family) Gives news in direct, succinct manner Explains information clearly, using appropriate language (avoids jargon) Is respectful of patient Offers emotional support Asks open-ended questions Acknowledges emotions of family and patient Attempts to elicit treatment goals and expectations States prognosis clearly Discusses treatment options Restates and summarizes as needed Invites questions

Addressing Futility

This particular scenario suggests the patient's father's concern about futility; the case states that he asks "if there is anything the team can do to save [my] son." Concern about futility seems to underlie the residents' decision to forego surgical intervention.

There are generally considered to be two types of futility, quantitative and qualitative [12], and the distinction between these types of futility is germane to the moral dilemma faced by Dr. J. Quantitative futility refers to the inability of an intervention to achieve the intended physiological outcome. In this scenario, the decompressive craniectomy is intended to decrease intracranial hypertension, which is possible, so would not be futile in a quantitative sense [13]. Qualitative futility, on the other hand, is the term applied to an intervention that results in an outcome that is below a standard that the patient would consider acceptable [14]. Discussions about qualitative futility are often more complex and more individualized as they center on things like benefit to the patient and quality of life. In this case, the family wants to know if anything can be done "to save" their son. This question is much more difficult question to answer because it's unclear what exactly Mr. D's father means by "save." Is saving merely maintaining pulse? Does it mean restoring Mr. D to his pre-injury functional status? Perhaps it is somewhere in between. In this scenario, Dr. J tells Mr. D's family that decompressive craniectomy "would not benefit Mr. D." Without having a conversation with the family about what would be an acceptable outcome, it would be difficult for Dr. J to know whether the procedure would in fact benefit the patient. To address the family's question of what can be done to save Mr. D, it would have been more appropriate for Dr. J to discuss the available treatment options and expected outcomes of each. This approach could have provided information that could have allowed the family and Dr. J to determine whether any of the available treatments could result in outcomes that the patient would consider acceptable.

Conclusion

Leading complex, highly emotional conversations involving brain death and severe traumatic brain injury is fraught with communication challenges. These conversations often involve issues beyond the medical issues being discussed. Ethical considerations such as quantitative futility, qualitative futility, respect for patient or surrogate autonomy, and surrogate decision making are all prominently featured in end-of-life conversations. Inadequate communication can make these ethical considerations problematic. Patient, physician, surrogate, and system-specific factors all can potentially contribute to inadequate communication. The urgency of trauma situations often thrusts trainees into a lead role before they are entirely ready to lead. At present, most trainees, both surgical and medical, are not given adequate formal training in leading difficult discussions about end-of-life care [4, 5, 7, 8, 10]. As a result, they are justifiably anxious about engaging in these conversations. These considerations underscore the importance of a multifaceted educational approach to communication that begins early in training and emphasizes tiered responsibility.

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