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Ethical Tenets of Perioperative Care: "Finding My Surgical Way Home"

Jason D. Hall, JD, Lee A. Goeddel, MD, MPH, and Thomas R. Vetter, MD, MPH

In the course of their daily practice, anesthesiologists are confronted with a number of conventional ethical issues connected to situations ranging from informed consent to end-of-life decision making [1]. The specialty of anesthesiology has recently evolved to include not only critical care and pain medicine but also perioperative medicine. The full spectrum of perioperative expertise is manifest in the perioperative surgical home (PSH), a new and innovative care model initially developed and now being widely advocated by the American Society of Anesthesiologists (ASA) in close collaboration with vital surgical, nursing, health care administrative, and payer stakeholders [2]. The PSH is a patient-centered, institution-led, interdisciplinary, team-based, coordinated, and—where possible—standardized care model that guides the patient from presurgical decision making to postdischarge care [3, 4]. The PSH seeks to improve the surgery experience and outcomes and to add measurable value to the highest-cost segment of health care.

The PSH holds significant potential to make health care more patient-centered [3]. Within its broad scope of responsibility, this innovative care model, if given the resources, can effectively address ethical issues in surgical patient care. In this paper, after describing the fundamentals of the PSH, we discuss two controversial and highly charged issues with significant ethical ramifications for anesthesiologists: patient-centered decision making and futility of care.

An Overview of the Perioperative Surgical Home

Multiple variants of the PSH will be implemented based upon institutional infrastructure, resources, and other factors [3-5]. Our prototypic PSH model at the University of Alabama at Birmingham (UAB) integrates the heretofore frequently fragmented preoperative, intraoperative, postoperative, and postdischarge phases of patient care [3]. It is based on the anesthesiologist's serving as the surgical patient's perioperativist—the primary physician who coordinates care with other team members to provide seamless continuity from preoperative evaluation to postoperative care. In the UAB PSH model, an anesthesiologist works in tandem with a nurse practitioner and a registered nurse (or social worker) case coordinator to provide, coordinate, and integrate pre-, intra-, and postoperative care. This team is readily available to address the patient's questions or concerns about his or her care and oversees the patient's transitional and rehabilitation plans on hospital discharge [3].

The UAB PSH model also involves a multimodal approach, often referred to as "fast-track surgery," in which not only surgeons, anesthesiologists, and nurses but also pharmacists, physical/occupational therapists, nutritionists, and social workers are equal participants of

the perioperative care team. Fast-track surgery focuses on enhancing recovery and reducing morbidity by implementing existing and new evidence-based, best practices in surgery and anesthesia, including analgesia, reduction of surgical stress, fluid and blood management, nutrition, and ambulation [6-8].

The Ethical Obligation to Maximize the Quality of a Patient's Health Care Decision Making
Receiving life-altering news about one's health is typically daunting. Deciding how best to proceed in such a situation commits a person who is already weakened by poor health and the stress of this life-changing news to a complicated process with multiple ethical implications.

For today's health care system to appropriately serve patients facing complex health care decisions, it must move beyond mere diagnosis and treatment. The health care system should not only deliver high-quality treatment but also empower patients to make health care decisions that align most closely with their desires, values, and cultural background. Two concepts are central to this discussion: (a) patient-centered health care and (b) shared medical decision making.

Patient-centered health care is a movement within modern medicine that aspires to tailor care to the needs, desires, and dynamics of each individual patient [9]. The Patient Protection and Affordable Care Act of 2010 mandated the use of quality care measures and, in certain circumstances, patient-centered assessments [10]. Shared medical decision making is a patient-centered process that responds to the complexity of health care decisions. As much as the patient desires, it encourages family, friends, or other caregivers to participate in making medical decisions that best fit the patient's goals and values [11]. The physician plays a critical role in the shared medical decision making process as a guide, teacher, and facilitator.

Although in some situations the patient may be clear about what decision to make, often the decision is not so easy. Consider, for example, the case of Mr. D, a 72-year-old African American man scheduled for radical nephrectomy for gross hematuria and renal mass, likely renal cell carcinoma, noted on a computed tomography (CT) scan to be invading the inferior vena cava. His past medical history is significant for hypertension, diabetes mellitus, and chronic obstructive pulmonary disease. His current medications include metoprolol, metformin, and aspirin. His electrocardiogram indicates left ventricular hypertrophy and an inferior infarct, age undetermined. Physical examination reveals a heart rate of 90, blood pressure of 190/100 mm Hg, BMI of 32, and harsh IV/VI mid-systolic ejection murmur over the "aortic area" or right second intercostal space, with radiation into the right neck. According to Mr. D's daughter, he is easily fatigued and essentially sedentary. Upon further questioning, Mr. D admits to recent progressive dyspnea and increasing angina. Recent laboratories include a fasting serum glucose of 220 mg/dL and creatinine of 2.5 mg/dL.

It is difficult, for instance, to accurately predict what Mr. D's life expectancy would be without surgery and to pinpoint his perioperative risk of morbidity and mortality. Most perioperative anesthesiologists would estimate that his risk is high due to preoperative evidence of multisystem disease involving the cardiac, renal, and endocrine systems as

well as local vascular invasion of the tumor. These factors put Mr. D at considerable risk for significant intraoperative blood loss, the need for massive transfusion, resulting coagulopathy, and prolonged postoperative mechanical ventilation. The evidence of a prior myocardial infarction and physical findings consistent with aortic stenosis indicates that, without valve replacement or balloon valvuloplasty prior to any further surgical interventions, he is at high risk of further myocardial ischemia and infarction or death with any anesthetic and the physiological stress of surgery.

Difficult questions need be asked: What does Mr. D. know? Does he understand the risks of these interventions? Does he appreciate that he will need multiple procedures, possibly followed by a prolonged intensive care unit (ICU) stay? Has he been offered palliative care solutions that might prolong his current quality of life?

In today's health care system, it is common that patients in situations similar to that of Mr. D proceed to the operating room without having meaningfully engaged in discussions of benefits and risks. Recent research clearly demonstrates deficiencies in the quality of medical decision making. One study evaluated patients' ability to restate the most basic information about a surgical procedure they had authorized. Thirteen percent of patients could not state the surgery to be performed, the surgical indication, the risks, or the alternatives. Thirty-three percent of patients stated that the decision did not address their preferences, values, or goals [12]. As physicians strive to provide competent care that respects patient dignity and thus adheres to the American Medical Association (AMA) *Code of Medical Ethics* [13], we must strive to optimize the quality of medical decision making whenever and however possible.

It is easy to speculate on but difficult to substantiate the reasons for these deficiencies in patient-centered health care decision making. To be sure, risk estimates are difficult for any physician to make. Patient-centered discussions and decision processes require a significant time investment, which may not carry reimbursement in a health care environment subject to cost-cutting attempts at every turn. Other stresses on physicians may discourage patient-centered decision making, including the threat of civil lawsuit and pressure to sustain high patient throughput in conventional fee-for-service health care systems. The latter may dissuade some physicians from discourse that leads patients to decide against more invasive operative treatments and in favor of palliative care options that may, at least currently, mean less favorable payment for their physicians.

The Role of the Perioperative Surgical Home in Patient-Centered Care and Shared Decision Making

Regardless of what has caused the current deficiencies in patient-centered care and shared decision making, the PSH offers unique opportunities for improvement. As stated above, it coordinates all aspects of perioperative care. It is a single entity through which all patients should pass before proceeding to surgery. Given the resources and infrastructure, it also is in the position to champion the ethically important process of patient-centered decision making. The PSH could generate a concise interpretable message for the patient from all relevant clinicians and then provide the space and time for the patient and the patient's chosen advocates to deliberate and interact with clinicians to make higher-quality patient-centered health care decisions. In this way, the PSH would provide a checkpoint

within today's health care system to minimize clinically futile surgery. When disagreement occurs—for instance, if the anesthesiologist, cardiologist, and surgeon disagree about the perioperative risk for a patient like Mr. D or how best to proceed—the PSH might serve as a viable forum for expeditious and respectful deliberation. Despite the many unknowns that face Mr. D and his anesthesia, surgical, and nursing team, the PSH model provides a higher likelihood that Mr. D will be empowered to make a higher-quality decision.

Conclusion

Decision making is so important and central to the patient experience that it is deserving of more resources and one central location that can allow for decision excellence. The PSH is a place not only to enact evidence-based clinical therapies but also to manage such vital care decisions. As a patient-centered care model emphasizing shared medical decision making, the PSH would provide patients like Mr. D the opportunity to prioritize their own values and goals of care. Through the PSH, such patients would have the opportunity to carefully consider the likely outcomes of each treatment modality in relation to their values and goals of care. In concert with the PSH health care team, their families, and other chosen representatives, patients would reach a patient-centered treatment decision that respects their values and reflects their goals of care, genuinely represents a shared decision, and provides for an optimal quality-of-life outcome from their perspective.

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Jason D. Hall, JD, is a fourth-year medical student at the University of Alabama at Birmingham School of Medicine and serves as vice speaker of the American Medical Association Medical Student Section. After graduating from medical school, he plans to pursue a residency in anesthesiology.

Lee A. Goeddel, MD, MPH, is a chief resident in the Department of Anesthesiology at the University of Alabama at Birmingham School of Medicine. After completing his residency training, Dr. Goeddel plans to pursue fellowships in both critical care medicine and cardiothoracic anesthesia.

Thomas R. Vetter, MD, MPH, is the Maurice S. Albin Professor in the Department of Anesthesiology, the vice chair and director of the Division of Pain Medicine, and the medical director of the Preoperative Assessment, Consultation and Treatment Clinic at the University of Alabama at Birmingham School of Medicine.

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