

# Chapter 3

## What Makes Surgical Ethics Unique?



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**Abstract** In this chapter, we provide an overview of ethical principles as they apply to health care, with a focus on surgical ethics. We discuss why surgical ethics matter and what makes surgical ethics unique, spanning aspects of patient care, professional integrity, research, administration, education, and surgical training and education. We present observations on how surgical ethics can be taught, and, finally, we speculate on the future of ethics in surgery.

**Keywords** Surgical ethics · Health care ethics · Health care · Education · Surgical education · Surgeon-patient relationship

### 3.1 Introduction

The word *ethics* is derived from the Greek word *ethos*, which means “character.” Ethics is the branch of philosophy that explores the notion of proper conduct, in that it strives to determine right versus wrong and to balance what is good for the individual versus for society. It investigates the nature of obligations or duties that people owe themselves and one another based on a thoughtful understanding of moral

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responsibility. The field of ethics has many subdivisions, including bioethics (health care and the biological sciences), clinical ethics (bedside), organization ethics (health care leadership), and medical ethics (physicians) [1]. A subcategory of the last is surgical ethics. What sets surgical ethics apart? How is it different from the more general medical ethics? In this chapter, we explain what makes surgical ethics unique and, going a step further, suggest how it can be taught to surgeons and trainees.

### 3.2 Discussion

#### 3.2.1 *Overview of Ethical Principles and its Application to Health Care*

In the practice of medicine and surgery, patient care is dictated by technical capabilities and knowledge as well as the exercise of clinical and moral judgment. When decisions must be made in the context of competing choices, no single answer may be apparent. Ethical principles can help in selecting or justifying the most favorable course of action.

Ethical analysis in medicine can take many forms and are generally classified into three frameworks: consequentialism, deontology, and virtue ethics [2]. In general, consequentialist theories assert that outcomes should guide choices. For example, according to utilitarianism, the morally superior choice is the one that creates the greatest good for the greatest number of people. Deontological theories hold that certain rules of behavior determine what is right and wrong: according to Kant’s categorical imperatives one should always treat oneself and others as ends in themselves, never as means to other ends. Virtue theory requires that personal development of proper characteristics, such as honesty, technical and intellectual competence, and compassion, will lead to good choices among competing options [2].

A commonly applied framework in health care is a combination of those approaches, the principlism approach advocated by Beauchamp and Childress [3] shown in Table 3.1. Certain structures or aids to ethics analysis have been

**Table 3.1** The principlism approach [3]

<p><b>Autonomy</b> The patient has the right to select a treatment from among several options after understanding the risks, benefits, and consequences of each</p>	<p><b>Beneficence</b> When caring for patients, the physician’s paramount obligation is to the best interest of the patient. To best serve that interest, the physician must maintain competence, good clinical judgment, life-long education, and accountability</p>
<p><b>Non-maleficence</b> A physician must not cause more harm than good, which includes recognizing one’s limitations as well as appropriate disclosure and discussion of complications, among many other means of avoiding harm</p>	<p><b>Justice</b> A physician should ensure equal treatment of similarly situated patients, without any medically unjustified discrimination</p>

recommended. Jonsen et al. have described a four-topics model approach [4], which includes examining the medical indications, patient preferences, quality of life, and contextual features of a case to select the best course of action (see Fig. 3.1).

The Four Topics Chart	
Medical Indications	Preferences of Patients
<p>The Principles of Beneficence and Nonmaleficence</p> <ol style="list-style-type: none"> <li>1. What is the patient's medical problem? Is the problem acute? chronic? critical? reversible? emergent? terminal?</li> <li>2. What are the goals of treatment?</li> <li>3. In what circumstances are medical treatments not are the probabilities of success of various treatment options?</li> <li>5. In sum, how can this patient be benefited by medical and nursing care, and how can harm be avoided?</li> </ol>	<p>The Principle of Respect for Autonomy</p> <ol style="list-style-type: none"> <li>1. Has the patient been informed of benefits and risk of diagnostic and treatment recommendations, understood this information, and given consent?</li> <li>2. Is the patient mentally capable and legally competent or is there evidence of incapacity?</li> <li>3. If mentally capable, what preferences about treatment is the patient stating?</li> <li>4. If incapacitated, has the patient expressed prior preferences?</li> <li>5. Who is the appropriate surrogate to make decisions for an incapacitated patient? What standards should govern the surrogate's decisions?</li> <li>6. Is the patient unwilling or unable to cooperate with medical treatment? If so, why?</li> </ol>
Quality of Life.	Contextual Features
<p>The Principles of Beneficence and Nonmaleficence and Respect for Autonomy</p> <ol style="list-style-type: none"> <li>1. What are the prospect, with or without treatment, for a return to normal life and what physical, mental, and social deficits might the patient experience even if treatment succeeds?</li> <li>2. On what grounds can anyone judge that some quality of life would be undesirable for a patient who cannot make or express such a judgement?</li> <li>3. Are there biases that might prejudice the provider's evaluation of the patient's quality of life?</li> <li>4. What ethical issues arise concerning improving or enhancing a patient's quality of life?</li> <li>5. Do quality-of-life assessment raise any questions that might contribute to a change of treatment plan, such as forgoing life-sustaining treatment?</li> <li>6. Are there plans to provide pain relief and provide comfort after a decision has been made to forgo life-sustaining interventions?</li> <li>7. Is medically assisted dying ethically or legally permissible?</li> <li>8. What is the legal and ethical status of suicide?</li> </ol>	<p>The Principles of Justic and Fairness</p> <ol style="list-style-type: none"> <li>1. Are there professional, interprofessional, or business interests that might create conflicts of interest in the clinical treatment of patients?</li> <li>2. Are there parties other than clinician and patient, such as family members, who have a legitimate interest in clinical decisions?</li> <li>3. What are the limits imposed on patient confidentiality by the legitimate interests of third parties?</li> <li>4. Are there financial factors that create conflicts of interest in clinical decisions?</li> <li>5. Are there problems of allocation of resouces that effect clinical decisions?</li> <li>6. Are there religious factors that might influence clinical decisions?</li> <li>7. What are the legal issues that might effect clinical decisions?</li> <li>8. Are there considerations of clinical research and medical education that affect clinical decisions?</li> <li>9. Are there considerations of public health and safety that influence clinical decisions?</li> <li>10. Does institutional affiliation create conflicts of interest that might influence clinical decisions?</li> </ol>

**Fig. 3.1** The four-topics matrix of Jonsen, Siegler, and Winslade, which is based on the Ethical Principlism approach of Beauchamp and Childress [4]. With permission, from Jonsen AR, Siegler M, Winslade WJ. Clinical ethics. 8th ed. McGraw-Hill; 2015

### 3.3 Why Do Surgical Ethics Matter?

Surgery is a moral practice, and every surgeon is a moral agent—Pellegrini [5]

Surgical ethics is a subcategory of medical ethics that focuses on issues concerning issues related to the care of surgical patients. It encompasses, but is not limited to, providing a framework to address dilemmas surgeons face in the daily care of patients, research, education, leadership, and management. Surgery is inherently a technical skill, but it is also, in more general terms, a healing art. A technically excellent outcome that fails to regard the relevant ethical principles in an encounter with a patient falls short of surgical excellence. A truly optimal outcome can result only when the technical and the ethical elements are in concordance. The ethical question in patient care is not “what *can* be done for this patient?” but rather, “what *should* be done for this patient?”

Surgical ethics is not a static system; it is dynamically informed by evolving technologies, value systems—both personal and societal—and worldviews. Ethical issues should be revisited periodically, and underlying assumptions may need to be overturned. Principles do not change, but their application may have to be tailored to changing needs or values of a specific community to best serve its members. The role of surgeons, too, may evolve. At various career stages, surgeons function as health care providers, teachers, learners, innovators, researchers, administrators, and leaders. Ethical principles that surgeons apply conform to a varied hierarchy of importance based on the roles and responsibilities they embody [1]. Pellegrini [5] proposed characteristics of excellence of a modern competent surgeon that include: (1) clinical skills and surgical judgment; (2) technical skills; (3) knowledge and practice of humanism, ethics, and moral values.

### 3.4 What Makes Surgical Ethics Different?

#### 1. *Training and education*

By definition and function of the specialty, surgeons necessarily inflict harm by performing an operation to heal—i.e., anatomical correction or removal of disease. The benefits of surgery, however, overbalance the harm. Surgery as a discipline requires technical performance as well as decisions based on appropriateness, acceptability, and standards of care, all of which are mastered during education and training, and refined through professional practice.

According to Chap. 9 of the American Medical Association (AMA) Code of Ethics [6], physicians have a responsibility to teach and mentor those who follow, for they are the future of our caring profession. The process of training the future generation of physicians, however, must be balanced with a physician’s obligation to the patient, and the patients’ freedom to choose from whom they received their medical treatment. The obligation to educate trainees is especially challenging in

surgical specialties, because the acquisition of technical skills and judgment comes with a learning curve that is uniquely consequential in surgery—errors made during operations can lead to immediate and grave consequences. To ensure patient safety and quality of care, appropriate faculty supervision is an absolute ethical requirement. Trainees gain competence through graduated responsibility that is linked to their level of training and expertise, as determined by their instructing surgeons. Trainees must be aware of their own limitations, and educators are obligated to evaluate and understand their trainees' abilities and readiness before advancing their responsibilities. Patients should be informed about modifications to standard procedures, if there are any, for educational purposes and be given the opportunity, without coercion, to agree or refuse.

In providing education for technical knowledge and skills, physicians have not only an ethical responsibility to accurately evaluate trainees for the welfare of future patients, but because no formal objective test for technical performance or proficiency is usually available upon completion of surgical training, educators have the vital role to constantly evaluate each trainee's technical performance throughout residency. This ensures the trainee has an environment to allow for successful achievement of competency and provides pathways for self-improvement should deficiencies be identified. Concurrently, educators must be aware of their own biases, both implicit and explicit, in their assessment of trainees' surgical competence and autonomous functioning to ensure that all receive equitable opportunities to succeed in their professional careers [7].

A major objective of surgical training is to provide trainees the tools and motivation to practice lifelong learning and self-improvement throughout their careers, ensuring that their future patients will continue to receive excellent care.

## 2. *Patient care*

The surgeon's mantle bestows many roles, but the role of caring for patients engenders the most distinctive and demanding ethical circumstances. Those unique ethical demands arise from the special relationship between surgeon and patient, a relationship that is characterized by professional intimacy and mutual reliance. No other professional relationship requires the same degree of trust, as is required when patients undergo anesthesia, rendering them completely helpless while allowing their surgeon to cut into their body. The profession therefore carries a heavy weight of responsibility for patients' well-being. They can never treat that responsibility lightly.

The process of informed consent is ethically necessary to respect the patient's autonomy in clinical and research settings. This process can be particularly challenging and nuanced in surgery for several reasons. Contrary to the paternalistic decision-making paradigm of the past, the current ethically best practice in planning a patient's treatment is shared decision making, in which the surgeon and patient together choose a treatment option that is best for the patient. It is an amalgamation of medical-surgical facts, which are provided by the surgeon, and the patient's value system. Together they decide on the best course to take. No matter the agreement or

disagreement, the patient makes the final decision, thereby exercising the right of personal autonomous decision making [8].

In the shared decision-making framework, the patient's autonomy is balanced with the surgeon's clinical experience, knowledge, and recommendation [8]. Transferring to the patient the medical knowledge required to understand the rationale and alternatives to treatment is not always possible, particularly when the time before surgery is limited. The stakes may be high, however, when the procedure at hand is highly invasive and carries life-threatening or life-altering risks while the patient is incapacitated under general anesthesia. If the need for treatment is time-sensitive, all of the necessary decision-making information is unlikely to be available [8]. Moreover, decision making is often complicated by factors such as varying degrees of capacity, minor status, language barriers, educational status, or religious factors that limit therapeutic options.

Despite these barriers, the profound depth of trust that characterizes the surgeon-patient relationship requires for its sustenance surgeons' uncompromising adherence to ethical principles. Many examples illustrate the importance of ethical principles that help to cultivate trust. Surgeons bear the responsibility of preserving the patient's physical and informational privacy, as well as maintaining strict confidentiality of all patient-related interactions. They must hold their patients' best interests above all potentially conflicting motives (e.g., promoting their own financial interests, rejecting high-risk patients because of public reporting, increasing productivity, enhancing a positive reputation, and burnishing relationships with industry). If errors have occurred, surgeons must fully disclose them to patients and families with honesty and humility. In return for surgeons' full dedication to patients' best interests, patients trust surgeons to take them safely through the surgical experience, navigating expected and unexpected intra- and post-operative events, which often require that decisions be made under conditions of uncertainty.

### ***3. Physician wellness and professional conduct***

Physicians are responsible for maintaining their own health and wellness to ensure that they are capable of continuing to provide safe and effective medical and surgical care for their patients according to Chaps. 8 and 9 of the AMA Code of Ethics [6]. Surgeons and surgical trainees are particularly at risk for burnout due to the length of working hours, delayed career gratification, and high-stakes operative outcomes [9]. The negative effects of emotional and physical fatigue, stress, burnout, and illness can prevent physicians from being able to perform at their best. When physicians' health or wellness is compromised, they are obligated to take measures to mitigate the problem, seek appropriate help, and take appropriate measures to protect patients. Physicians and their colleagues have a collective obligation to create communities and environments that foster their own wellness and that of others. A corollary obligation is to assist, intervene, and report impaired colleagues according to Chaps. 8 and 9 of the AMA Code of Ethics [6].

The way physicians and surgeons conduct themselves, in person and online, must uphold the values and standards of the medical profession. Surgeons take on various roles beyond being a physician, such as advocate, scholar, collaborator,

leader, and educator of not only trainees, but also of patients, colleagues, and the public. They have an obligation to communicate truth and information, and to counter misinformation. Best practices for surgeons' social media have been published by the Cardiothoracic Ethics Forum [10] and are consistent with the Codes of Ethics of Society of Thoracic Surgeons (STS) [11] and the American Association for Thoracic Surgery (AATS) [12]. In brief, as with in-person relations, online interactions must preserve patient confidentiality and privacy, uphold professionalism, maintain boundaries, appropriately disclose conflicts of interest, portray oneself and content accurately, understand the permanence of all online activity, and recognize that great responsibility accompanies the influence arising from respect and authority.

#### 4. *Surgical research*

The common purpose of all operations, which are inherently invasive and are often costly, is to maximize healing and reduce harm. This purpose can be undermined if the rationale for a treatment is not objectively rooted in empirical facts, in which case standard therapies would then remain in general use without demonstrable efficacy. Surgical research provides the means to evaluate, improve, and disseminate facts about the science and art of surgery.

The nature of innovation is such that some treatments in early stages of development may be without benefit or may appear to be harmful, futile, or unethical. Historical texts contain many examples of declarations that certain treatments or operations are beyond the realm of possible. Theodor Billroth, possibly the greatest of all nineteenth century surgeons, famously exclaimed, "A surgeon who tries to suture a heart wound deserves to lose the esteem of his colleagues" [13]. Progress has often arisen, however, from courageous innovation and has erased doubt, such as Ludwig Rehn's suture repair of a heart laceration that challenged Billroth's declaration just a few years later. Innovation and research have been the processes by which new approaches are realized and hypotheses are proven and generalized into surgical practice.

The methodology of surgical research is different from most medical research for several reasons (see Chap. 48). Randomized controlled trials (RCTs) are more difficult to carry out for surgical procedures than, for example, for pharmaceutical trials. A 50 mg pill is the same no matter who prescribes it or where it is administered. Surgical procedures, however, are highly variable, depending on who the surgeons are, how many such procedures they have performed, what innovative technical variations they have introduced, and the local surgical culture at the institution in which it is done. The surgical learning curve of individual surgeons is more or less steep, depending on their experience and skill. Because of the need for substantial numbers of patient-subjects in order to achieve sufficient statistical power for valid conclusions, an increasing number of studies in surgery are multi-institutional. Unlike the standard dose of a medication, the standard techniques for a particular surgical procedure are highly variable, so comparison of one procedure with another when multiple surgeons are involved, is subject to important consistency errors [14].

Another challenge for surgical RCT studies is the unavailability of blinding for both the patients and investigators—surgeons always know what they are doing to their patients, so double-blinded RCTs are difficult, often impossible, to carry out. Although sham surgery, in which some subjects receive the true operation and the control group receive only an incision and a scar, has been ethically criticized, some have been successful in defining the efficacy or ineffectiveness of a procedure. In addition, the culture of surgery often encourages projecting confidence (e.g., “sometimes in error but never in doubt”) [15], combined with the cognitive bias that doing something is more beneficial than withholding action, may not be conducive to careful, and at times tedious, adherence to protocols.

Overcoming these challenges requires anticipating pitfalls in ethical conduct of surgical research and establishing policies or structures to protect patients. The Belmont Report of 1979 established ethical principles for protection of research subjects and defined what constitutes research in distinction from practice [16]. Its principles—respect for persons, or autonomy, beneficence, and justice—were codified in 1984 in federal regulations that became known as the Common Rule [17], which established enforceable guidelines for research, including research oversight committees that the regulations termed Institutional Review Boards. Those regulations are intended to protect surgical research subjects, as all clinical research subjects, from potential exploitation, undue risks, or false or misleading information about a research protocol. Seven requirements for the ethical conduct of clinical research have been described: (1) socially valuable health-related knowledge, (2) rigorous methods that produce scientifically valid data, (3) fair selection of participants, (4) favorable risk-benefit ratio, (5) independent committee review and oversight, (6) thorough informed consent and (7) respectful treatment of patients during the course of research [14]. Together, these tenets ensure that clinical research is carried out within an ethical framework.

## 5. Administration

Surgeons' roles extend beyond clinical care and the operating theater, to include ethical obligations in the administrative, societal, and leadership realms. In administrative roles such as committee members and department and division leaders, surgeons wield substantial influence over the conduct of department, hospital, or university functions, including operating room culture, research directions and facilities, and education of students and trainees. Surgeons also face various pressures to meet the needs of their multispecialty teams, their employers, government regulations, a complex web of referral patterns, and national societies. This requires them to remain cognizant of the terrain of potential ethical problems and navigate them with thoughtful analysis and honest communication.

Surgeons may also contribute to developing and administering ethical standards at a local and national level through participation in groups such as the ACS Committee on Ethics and the STS Committee on Standards and Ethics [18]. Such committees and their members infuse ethical conversations into the surgical literature and conferences in various ways: publishing textbooks or manuscripts in specialty journals, hosting salient ethical presentations and debates at national



conferences, and performing regulatory roles such as peer-review functions. Surgeons can also be directly involved in writing and implementing policies regarding the standards of the profession on topics such as engaging with social media, industry, and other entities that may be fraught with ethical dilemmas.

At a societal level, surgeons may exercise an ethical obligation to advocate for their patients through political activism, such as fundraising, lobbying, and testifying before congressional committees. Some have argued for an ethical obligation to testify in medically related court proceedings [19] (See Chap. 18). These activities can ultimately influence health policymaking at all levels of government.

## 3.5 How to Teach Surgical Ethics

### 1. *Teaching ethics*

Teaching surgical ethics (See Chap. 11) can provide an opportunity for surgeons and those in training to develop a proper framework and vocabulary for moral reasoning and deliberation. As they attempt to make sense of ethical problems as they arise, they can continue to refine their understanding [20]. Furthermore, teaching surgical ethics would meet most components of professionalism as required by the Accreditation Council for Graduate Medical Education (See Chap. 16). The Council's professionalism standard states:

Residents must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Residents are expected to demonstrate:

- Compassion, integrity, and respect for others
- Responsiveness to patient needs that supersedes self-interest
- Respect for patient privacy and autonomy
- Accountability to patients, society and the profession; and,
- Sensitivity and responsiveness to a diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation. [21]

### 2. *Perspectives on an ethics curriculum*

A taxonomy of ethics curricula describes three overlapping spheres: (1) a formal curriculum taught in the classroom; (2) an informal curriculum consisting of ad hoc lessons, values, and attitudes learned through interactions with others; and (3) a "hidden curriculum", which includes all socialized influences embedded in task-specific experiences [22]. A qualitative study of surgical faculty and trainees demonstrated unanimous agreement on the importance of ethics education as a component of surgical training [22]; however, despite clinical exposure to ethical topics, residents' knowledge base was poor [23]. Furthermore, participants indicated that although some ethical issues can be conveyed in a formal curriculum, informal curricular teaching is also highly valued through real case discussion and varied teaching methods including but not limited to role-playing, debates, objective structured clinical examinations, and small group discussions, to bridge the

divide between knowledge and application [22]. Furthermore, feedback on how one handles ethically difficult situations in informal curricula teaching or clinical practice was valued by participants in order to help identify areas for improvement, much like the process to refine and cultivate one's surgical skills.

### 3. *Challenges in teaching surgical ethics*

Trainees have identified challenges in teaching surgical ethics [22]: (1) providing trainees with an ethical framework; (2) providing practical insight into the issues they face within their particular specialties; and (3) demonstrating real-life perspectives using case-based examples to learn to apply their knowledge to clinical practice. Trainee respondents also identified challenges when facing and navigating situations involving unethical faculty behavior or ill-conceived administrative decisions.

In the field of cardiothoracic surgery, surgical ethics has been taught and fostered by the Cardiothoracic Ethics Forum, which provides ethics education for cardiothoracic surgeons through presentations and debates on ethical issues at national meetings of cardiothoracic surgical societies. In addition to their ethics committees, the STS and the AATS also have established the position of ethics editors of their respective journals, *The Annals of Thoracic Surgery (ATS)* and the *Journal of Thoracic and Cardiovascular Surgery (JTCVS)*, through which publication of articles on ethical issues in surgery can be facilitated. In a survey of 578 cardiothoracic surgeons [24], 83% of respondents believed that cardiothoracic surgeons would benefit from ethics education to improve their understanding of complex ethical issues in cardiothoracic surgery; 64% agreed or strongly agreed that ethics sessions at national meetings improved their understanding. In addition to the aforementioned efforts, the Cardiothoracic Surgery Ethics Forum supports opportunities for intellectual development and preparation for leadership roles in surgical ethics through scholarships for surgeons and trainees to obtain formal education and training in biomedical ethics.

## 3.6 Future Directions

Surgical ethics is not a static discipline, but is dynamic and constantly evolving, shaped by scientific advances, administrative demands, national and world events, and shifting societal values. The practice of surgery requires a deep fund of knowledge and sound judgment about ethical challenges encountered in daily practice. Educators should seek to continually evaluate and refine education in surgical ethics to ensure it remains relevant and able to meet the needs of trainees and faculty. Surgeon teachers can capitalize on their past experiences to provide case-based examples and discuss with learners the options, decision-making process, potential solutions and outcomes. A specific program to accomplish this through morbidity and mortality rounds has been described recently [25] and should be adopted by surgical training programs more widely. Trainees should make every effort to be present during faculty discussions with patients and their families regarding the

risks, benefits, and uncertainties of a proposed surgical treatment, and should seek guidance when faced with ethical dilemmas. Furthermore, just as surgical simulation laboratories help trainees improve technique and self-confidence in technical skills, proficiency at managing ethical problems can be strengthened through demonstration and varied active learning methods with trainee engagement.

### 3.7 Concluding Remarks

Over 20 years ago, we studied a previously described disparity in the rate of discussion of ethical issues between the medical and the surgical literatures [1, 24]—such discussions had been found to be four times more frequent in the medical than in the surgical literature. In the two decades since that publication, efforts to address the gap by increasing discussion of ethical issues in surgical meetings and publications and to introduce ethics education in surgical training programs have flourished. In cardiothoracic surgery alone in the last two decades, members of the Cardiothoracic Ethics Forum have published nearly 500 papers on ethical issues in the surgical and related literature, have presented over 50 hour-long ethics discussions and debates at national cardiothoracic surgical society meetings, and have developed numerous ethics-related policies for surgical societies.

Methods and programs for formal ethics education in surgical training programs have been developed and disseminated by such institutions as the MacLean Center for Clinical Medical Ethics of the University of Chicago, and the Joint Centre for Bioethics, Dalla Lana School of Public Health of the University of Toronto.

The depth of trust demanded between patients and surgeons in clinical surgery place the surgeon in unique ethical circumstances, and ethical practice has been deeply ingrained in surgeons for well over a century; that embedded ethical tradition was not recognized as such, however, nor were ethical issues often explicitly discussed in formal settings until recently. Our thoracic surgeon colleague and ethicist, Martin McKneally, has said, “Surgeons are practicing ethicists throughout their career” [26]. To that idea we could add that surgeons *have always been* practicing ethicists. Now, ethics discussions and education has been made a permanent and explicit part of surgical meetings, conferences, and rounds, as well as of surgical training—we believe this will redound to the ultimate betterment of surgical practice.

### 3.8 Selected References

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professional integrity, relationships with patients in terms of autonomy and consent, innovation and use of technology as well as organ donation and transplantation. In addition, conflicts of interest in surgery as well as ethical issues in health-care policy are also explored.

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