Ethical Dilemmas in Anesthesia

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Medical oaths: Hippocratic Oath — much of it inappropriate for modern practice, but some parts remain relevant; many variations of Hippocratic Oath have been formulated to rectify shortcomings; conflicts between ethical oaths and economic constraints may be encountered; American Medical Association (AMA) code of ethics (1847) — “derogatory to professional character it is for a physician to hold a patent for any surgical instrument or medicine”; this contradicts modern standards; concept of ethics has changed over time

Medical ethical issues: futile care (eg, prolonged ventilation for patient with brain death); treatment of family members; cultural concerns; truth-telling and disclosures; do-not-resuscitate (DNR) in operating room (OR); brain death and organ harvesting; working while impaired (due to, eg, drugs, lack of sleep)

Principles of ethics: beneficence, nonmaleficence, autonomy, justice, dignity, truthfulness, and informed consent; first 4 concepts together referred to as principlism; advance directive (or living will) — defined as declaration of competent adult concerning treatment preferences should he or she become incompetent and unable to make choices; durable power of attorney for health care — document that designates person authorized to make decisions on patient’s behalf should he or she be unable to do so; could be relative or medical colleague; has advantage over advance directive because all circumstances cannot be anticipated

DNR in OR: previously, DNR considered suspended because anesthesia concurrent with resuscitation; American Society of Anesthesiologists (ASA) formulated guidelines in 1992 for ethical care of patients with DNR orders; requires discussion with patient to determine which medical procedures desired; 3 choices — full attempt at resuscitation; limited attempt at resuscitation defined with regard to specific procedures (eg, intubation, insertion of pacemaker, chest compressions); limited attempt at resuscitation defined with regard to patient’s goals and values

Unconventional directives: DNR tattoos — intent of patient underlying legal principle, even if choices not documented in conventional way; improper documentation — Jehovah’s Witness presented with undated and unwitnessed card in wallet declaring wishes; patient received transfusion, survived, and sued; judge ruled that intent of patient clear (ie, she did not wish to have blood transfusion); informed consent — previously considered “process” (did not legally require signature of patient; sufficient to document that discussion with patient about which procedures he or she agreed to undergo took place, and that patient’s wishes being carried out); however, Joint Commission has determined that signature required

Moral principles in medicine: beneficence — treatment guided by benefit to patient; nonmaleficence — do no harm; autonomy — personal right to refuse or choose treatment; conflicts between principles — questions raised about which principle takes precedence in particular situation (eg, Jehovah’s Witness who does not want blood transfusion [ie, autonomy] in conflict with saving life [ie, beneficence]); in Western societies, autonomy usually prevails over other principles in adults; however, power of autonomy not universal; justice — fair distribution of scarce resources

Theories of ethics: character ethics (or virtue ethics) — ie, “what would a good person do”; based on character; conduct ethics — more common; defined as “what should you do”; “good” difficult to define

Approaches to conduct ethics: deontological approach — rule or duty-based approach (eg, do not kill innocent people); consequentialist approach — determined by consequences; practical differences between 2 approaches — according to deontological approach, bombing of Japan during World War II immoral because innocent civilians killed; consequentialism considers that bombing probably saved more lives (Japanese and American) than were lost, and therefore morally correct; utilitarianism — one approach within consequentialism; calculates utility (eg, how many lives saved by different actions); defines actions as morally right if they promote happiness, ie, pleasure and absence of pain; asserts that pleasure and pain can be quantified; many argue that such entities cannot be measured

Lying: consequentialist approach — may argue that lying wrong because it leads to loss of trust in relationship; however, may also argue that certain consequences may make lying acceptable; deontological approach — lying always wrong regardless of any potential good; virtue ethicist — focuses how lie reflects on person’s character or moral behavior; example — Nazis ask residents of Netherlands if any Jews present; for consequentialist, lying would be moral; deontologist would consider lying

Educational Objectives

The goal of this program is to improve decision-making when faced with ethical and legal dilemmas and to review current requirements for demonstrating clinical competence. After hearing and assimilating this program, the clinician will be better able to:

1. Counsel patients about options for do-not-resuscitate orders and advance directives.
2. Recognize the intent of unconventional medical directives.
3. Make ethical treatment decisions in situations in which there is conflict between the principles of autonomy and beneficence.
4. Evaluate the relationship between human error and malpractice claims.

5. Cite limitations of the measures of physician performance that are used to judge competence.

Faculty Disclosure

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wrong, which illustrates shortcoming of this approach (ie, many factors need to be considered in moral decisions)

Application to clinical situation: example — patient presents for simple operation that will be performed by inexperienced surgeon; in holding area, patient asks anesthesiologist about quality of operating surgeon; according to consequentialist approach, best response one which would not frighten patient; deontologist would say that “truth must be told”

Conclusions about theories of ethics: some consider deontology and consequentialism too binary (clinical decisions require more nuanced approach); in practice, moral intuition drives ethical choices

Case study: 73-yr-old man with peripheral vascular disease, right hemiplegia, and progressive dysphasia; DNR order documented in chart; patient appears depressed; he states unequivocally that he does not want resuscitation regardless of cause or prognosis; patient undergoes subarachnoid block; he has cardiac arrest in OR, presumably because subarachnoid block traveled too high; from medical point of view, cardiopulmonary resuscitation not futile, but patient clearly stated wishes; deontological approach would dictate that patient’s instructions must be followed; consequentialism would weigh consequences of patient’s survival against those of his death (eg, physician may be sued)

Participation in judicial executions: forbidden by AMA, ASA, and other organizations; almost certainly, some innocent people have been executed because of false testimony; AMA Council on Ethical and Judicial Affairs prohibits any participation, including electrocardiography, technical advice, prescribing of medication, preparation, or supervision; counterargument — capital punishment legal; duty of physician to provide comfort and relieve pain and suffering; physicians most logical source of skills needed to provide most humane execution; currently, lethal injection consists of sodium pentothal, pancuronium, and potassium chloride; however, application of nitrous oxide hood would succeed in anesthetizing prisoner and then producing anoxia, which would be bloodless and painless

Judging Clinical Competence

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National Practitioners Data Bank (NPDB): tracks payments made on behalf of physicians in connection with medical liability; in 2010, expanded scope to include sanctions against licenses, clinical privileges, and those made by professional societies (for, eg, unethical practice, inappropriate expert testimony); shortcomings of NPDB — gives absolute number rather than rate of malpractice claims (ie, does not take into account differences between physicians in numbers of cases performed); greater shortcoming is lack of relationship between human error and malpractice litigation

Harvard Medical Malpractice Study: reviewed 38,000 anesthesiology performed in New York state between 1992 and 1994; determined that human error which leads to disability and fulfilled criteria for malpractice occurred in 13 cases; during this period, 18 claims filed, but no overlap found between 13 instances of human error and filed malpractice claims

Peer review: 2 structured peer review processes endorsed by ASA; human factors — improper technique; misuse of equipment; disregarding available data (eg, giving patient known allergen); failure to seek appropriate data (eg, extubation in absence of any criteria for extubation); inadequate knowledge; lack of proper supervision of residents; errors in communication; lack of professionalism; system factors — technical accidents (considered system factor if adverse event occurred while performing technique correctly); equipment failure despite being properly maintained and checked; limitations of therapeutic standards, ie, occurrence of adverse outcome despite adherence to therapeutic standards; limitations of diagnostic standards (eg, poor outcome could be prevented if all preexisting conditions known; however, current standards of care do not warrant testing to identify all preexisting conditions); limitations of resources (eg, fiber-optic equipment, blood products); limitations of supervision (eg, on-call anesthesiologist covering multiple locations); lack of professionalism exhibited by another provider (eg, surgeon); contribution of system factors — in survey of adverse events at multiple academic institutions, human factors responsible for only 3.5% to 11% of all events; data consistent with ranges of human factors in almost every industry

Fear of reporting: reporting adverse events key component to improving performance; removing fear requires that response corrective rather than punitive; fear of reporting reduced by emphasizing and scrutinizing system factors as closely as human factors; drivers of fear — impression that reporting increases risk for litigation (however, no relationship between human error and litigation; when error made, apologizing and emphasizing with patient reduces malpractice risk); impression that reporting errors suggests that practitioner less competent than colleagues

Judging incompetence: speaker’s review of data found rate of errors by anesthesia provider 3.2 per 10,000 anesthetics; power analysis — in survey, anesthesia providers estimated rate of error that should necessitate remedial training (3 times average, or >10) and rate that should be considered incompetence (4 times average, or 12.8); to reduce alpha error (ie, fraction of competent providers that would be judged as incompetent) and beta errors (ie, fraction of incompetent providers judged as competent) to acceptable levels, review of >21,000 procedures per anesthesiologist would be required (on average, >20 yr of work); speaker concludes that rates of human error rate cannot be used to judge competence

Maintenance of Certification in Anesthesiology (MOCA): American Board of Medical Specialties requires every medical specialty to develop program for maintenance of certification; implications of MOCA — will be measure for Physicians Quality Reporting System; practitioner will receive less reimbursement if not participating in MOCA

Components of MOCA: part 1 — attests to professional standing (licensure); part 2 — continuing medical education (CME); part 3 — cognitive multiple-choice examination; part 4 — practice performance assessment and improvement

Professional standing: medical licensure requires medical school, graduate training, background checks (for criminality and mental health), and successful completion of United States Medical Licensing Examination (USMLE); USMLE — step 1 consists of multiple-choice examination assessing knowledge of basic sciences; step 2 includes multiple-choice examination and standardized patient models to determine whether knowledge can be applied to supervised setting; finishing step 2 allows physicians to administer medical care under supervision; step 3 consists of multiple-choice examination focusing on ability to assess and manage patients without supervision; while initial licensing rigorous, renewal process minimal

MOCA requirements for CME: 350 credits over 10 yr; 250 credits must be category 1; credits cannot exceed 70 in any calendar year; self-assessment programs (eg, Self-Education and Evaluation [SEE] program of ASA) must be completed; 20 credits in patient safety program required; monitoring of CME participation not rigorous; efficacy of CME — Cochrane Collaboration report concluded that educational meetings alone or in combination with other interventions (eg, practice alerts) can improve professional practice and outcomes; effectiveness increased by participation in mixed format of interactive and didactic programs (eg, lecture plus problem-based learning); practice-based learning with serious outcomes tends to have
greater impact on practice, but not likely to be effective in changing complex behaviors (and therefore, unlikely to help incompetent providers).

**Examination for MOCA:** 200 multiple-choice questions, 75% general topics and 25% in subspecialties; pass rate >90% per examination; multiple attempts allowed

**Practice performance assessment and improvement:** attestation consists of references to verify that candidate clinically active and participates in performance improvement activities; case evaluation involves 4-step process to assess candidates practice and implement changes that improve outcomes; simulation case

**Attestation:** 3 references required from clinicians in supervisory roles; does not evaluate competence (only asks if candidate active)

**Case evaluation:** practice performance assessment; requires collection of outcome data or feedback from patients; compares performance of candidate to guidelines, expert consensus, or peer data; new data collected to demonstrate equivalence to peers or improvement; examples of case evaluations — rates of administration of prophylaxis for postoperative nausea and vomiting, surgical site infection, hypothermia, and use of perioperative β-blockers

**Drawbacks of MOCA:** renewal of medical license not rigorous; CME has small benefit and does not change complex behaviors associated with incompetence; multiple attempts given to pass written examination; case evaluation represents small sample size; candidate able to choose which measures submitted; simulation does not include assessment

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**Acknowledgments**

Dr. Doyle and Dr. Lagasse spoke at the 64th Annual Postgraduate Symposium on Anesthesiology, held April 11-13 in Kansas City, MO, and presented by the Departments of Anesthesiology and Continuing Education and Professional Development, University of Kansas Medical Center, Kansas City, KS. For information on upcoming CME meetings from the University of Kansas Medical Center, please visit kumcc.ku.edu, or visit our website, Audio-Digest.org, and click on “Upcoming Meetings.” The Audio Digest Foundation thanks the speakers and the sponsors for their cooperation in the production of this program.

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**Suggested Reading**


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**Estimated time to complete the educational process:**

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<th>Activity</th>
<th>Time</th>
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<tr>
<td>Review Educational Objectives on page 1</td>
<td>5 minutes</td>
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<tr>
<td>Take pretest</td>
<td>10 minutes</td>
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<td>Listen to audio program</td>
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<td>Review written summary and suggested readings</td>
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<td>Take posttest</td>
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ETHICAL DILEMMAS/CLINICAL COMPETENCE

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1. Which of the following are the 4 components of principlism?
   1. Beneficence
   2. Nonmaleficence
   3. Truthfulness
   4. Informed consent
   5. Justice
   6. Dignity
   7. Autonomy
   (A) 1,2,4,6 (B) 2,3,4,5 (C) 1,2,5,7 (D) 3,4,6,7

2. When treating a patient with a do-not-resuscitate (DNR) order in the operating room, which of the following procedures is permissible?
   (A) Endotracheal intubation (C) Chest compressions
   (B) Insertion of a pacemaker (D) Only those to which the patient has agreed

3. Which of the following is an accurate statement about medical directives?
   (A) Intent of patient is the guiding legal principle (C) If documents stating patient preferences are not dated or witnessed, they are not legally valid
   (B) DNR tattoos are not legally valid (D) Signature of the patient has always been required for informed consent

4. When conflicts arise between the moral principles of beneficence and autonomy, ______ usually takes precedence.
   The principle of justice refers to _______.
   (A) Beneficence; the right of patients to sue for malpractice (B) Autonomy; the right of patients to sue for malpractice
   (C) Beneficence; fair distribution of scarce resources (D) Autonomy; fair distribution of scarce resources

5. According to the _______ approach, lying is always considered wrong.
   (A) Deontological (B) Consequentialist (C) Virtue ethics (D) All the above

6. In the Harvard Medical Malpractice Study, cases in which physician error were committed:
   (A) Had no overlap with malpractice suits filed (B) Corresponded with 25% of malpractice suits filed
   (C) Corresponded with 50% of malpractice suits filed (D) Corresponded with 75% of malpractice suits filed

7. Human factors are responsible for _______ of medical adverse events.
   (A) 40% to 54% (C) 12% to 19%
   (B) 21% to 35% (D) 3.5% to 11%

8. Judging the competency of an anesthesiologist by determining his or her rate of clinical errors would require examining ______ procedures per provider.
   (A) 1000 (B) 5000 (C) 10,000 (D) 20,000

9. Which of the following was concluded by a Cochrane Collaboration review of the effects of continuing medical education on medical practice?
   (A) Participation in educational meetings alone does not improve professional practice or outcomes
   (B) Mixed formats consisting of didactic lectures and interactive problem-solving do not improve effectiveness
   (C) Using serious outcomes in practice-based learning tends to increase the impact on practice
   (D) Incompetent providers can learn to change complex behaviors through practice-based learning

10. Which of the following is an accurate statement about the Practice Performance and Improvement component of the Maintenance of Certification in Anesthesiology?
    (A) Attestations are used to assess clinical competence
    (B) Case evaluations require a comprehensive review of anesthesiologist’s practice
    (C) Collection of clinical data should demonstrate outcomes equivalent to those of peers
    (D) Simulation programs include assessment