11.1.2 Physician Stewardship of Health Care Resources

Physicians' primary ethical obligation is to promote the well-being of individual patients. Physicians also have a long-recognized obligation to patients in general to promote public health and access to care. This obligation requires physicians to be prudent stewards of the shared societal resources with which they are entrusted. Managing health care resources responsibly for the benefit of all patients is compatible with physicians' primary obligation to serve the interests of individual patients.

To fulfill their obligation to be prudent stewards of health care resources, physicians should:

(a) Base recommendations and decisions on patients' medical needs.

(b) Use scientifically grounded evidence to inform professional decisions when available.

(c) Help patients articulate their health care goals and help patients and their families form realistic expectations about whether a particular intervention is likely to achieve those goals.

(d) Endorse recommendations that offer reasonable likelihood of achieving the patient's health care goals.

(e) Use technologies that have been demonstrated to meaningfully improve clinical outcomes to choose the course of action that requires fewer resources when alternative courses of action offer similar likelihood and degree of anticipated benefit compared to anticipated harm for the individual patient but require different levels of resources.

(f) Be transparent about alternatives, including disclosing when resource constraints play a role in decision making.

(g) Participate in efforts to resolve persistent disagreement about whether a costly intervention is worthwhile, which may include consulting other physicians, an ethics committee, or other appropriate resource.

Physicians are in a unique position to affect health care spending. But individual physicians alone cannot and should not be expected to address the systemic challenges of wisely managing health care resources. Medicine as a profession must create conditions for practice that make it feasible for individual physicians to be prudent stewards by:

(h) Encouraging health care administrators and organizations to make cost data transparent (including cost accounting methodologies) so that physicians can exercise well-informed stewardship.

(i) Advocating that health care organizations make available well-validated technologies to enhance diagnosis, treatment planning, and prognosis and support equitable, prudent use of health care resources.

(j) Ensuring that physicians have the training they need to be informed about health care costs and how their decisions affect resource utilization and overall health care spending.

(k) Advocating for policy changes, such as medical liability reform, that promote professional judgment and address systemic barriers that impede responsible stewardship.

AMA Principles of Medical Ethics: I,V,VII,VIII,IX

Background report(s):

CEJA Report 2-N-21 Amendment to 11.1.2, "Physician Stewardship of Health Care Resources"

CEJA Report 1-A-12 Physician stewardship of health care resources

REPORT OF THE COUNCIL ON ETHICAL AND JUDICIAL AFFAIRS*

CEJA Report 02-N-21

Subject:	Amendments to Opinions 1.2.11, "Ethical Innovation in Medical Practice"; 11.1.2, "Physician Stewardship of Health Care Resources"; 11.2.1, "Professionalism in Health Care Systems"; and 1.1.6, "Quality"
Presented by:	Alexander M. Rosenau, DO, Chair
Referred to:	Reference Committee on Amendments to Constitution and Bylaws

As the Council on Ethical and Judicial Affairs noted in its recent informational report on augmented intelligence (AI) in medicine:

> AI systems represent the latest in a long history of innovations in medicine. Like many new technologies before them, AI-based innovations challenge how physicians practice and how they interact with patients at the same time that these innovations offer promises to promote medicine's Quadruple Aim of enhancing patient experience, improving population health, reducing cost, and improving the work life of health care professionals [1].

At the same time, several characteristics distinguish AI-enabled innovations from other innovations in medicine in important ways. The data-driven machine-learning algorithms that drive clinical AI systems have the potential to replicate bias in the data sets on which they are built and exacerbate inequities in quality of care and patient outcomes. The most powerful, and useful, models are "black boxes" that have the capacity to evolve outside of human observation and independent of human control. Moreover, the design, development, deployment, and oversight diffuse accountability over multiple stakeholders who have differing forms of expertise, understandings of professionalism, and diverging goals.

Published analyses of ethical challenges presented by AI in multiple domains have converged around a core set of goals [2,3,4]:

- Protecting the privacy of data subjects and the confidentiality of personal information
- Ensuring that AI systems are safe for their intended use(s)
- Designing systems of accountability that are sensitive to the roles different stakeholders play in the design, deployment, performance, and outcomes of AI systems
- Maximizing the transparency and explainability of AI systems
- Promoting justice and fairness in the implementation and outcomes of AI systems
- Maintaining meaningful human control of AI technologies
- Accommodating human agency in AI-supported decision making/the use of AI

Realizing these goals for any AI system, in medicine or other domains, will be challenging. As the Gradient Institute notes in its report, Practical Challenge for Ethical AI, AI systems "possess no

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intrinsic moral awareness or social context with which to understand the consequences of their actions. To build ethical AI systems, designers must meet the technical challenge of explicitly integrating moral considerations into the objectives, data and constraints that govern how AI systems make decisions" [5]. Developers must devise mathematical expressions for concepts such as "fairness" and "justice" and specify acceptable balances among competing objectives that will enable an algorithm to approximate human moral reasoning. They must design systems in ways that will align the consequences of the system's actions with the ethical motivation for deploying the system. And oversight must meaningfully address "the problem of many hands" in ascribing responsibility with respect to AI systems [6].

GUIDANCE IN THE AMA CODE OF MEDICAL ETHICS

Policies adopted by the AMA House of Delegates address issues of thoughtful AI design (H-480.940, "Augmented Intelligence in Health Care") and matters of oversight, payment and coverage, and liability (H-480.939). Policy H-295.857 addresses issues of AI in relation to medical education. AMA has further developed a framework for trustworthy AI in medicine that speaks broadly to the primacy of ethics, evidence, and equity as guiding considerations for the design and deployment of AI systems in health care and the interplay of responsibilities among multiple stakeholders [7].

The introduction of AI systems in medicine touches on multiple issues of ethics that are currently addressed in the AMA *Code of Medical Ethics*. These include quality of care, innovation in medical practice, stewardship of health care resources, and professionalism in health care systems, as well as privacy.

The *Code* grounds the professional ethical responsibilities of physicians in medicine's fundamental commitment of fidelity to patients. As Opinion 1.1.1 notes:

> The practice of medicine, and its embodiment in the clinical encounter between a patient and a physician, is fundamentally a moral activity that arises from the imperative to care for patients and to alleviate suffering. The relationship between a patient and a physician is based on trust, which gives rise to physicians' ethical responsibility to place patients' welfare above the physician's own self-interest or obligations to others, to use sound medical judgment on patients' behalf, and to advocate for patients' welfare.

From the perspective of professional ethics, securing this commitment should equally inform medicine's response to emerging AI-enabled tools for clinical care and health care operations.

Guidance in Opinion 1.2.11, "Ethical Innovation in Medical Practice," calls on individuals who design and deploy innovations to ensure that they uphold the commitment to fidelity by serving the goals of medicine as a priority. It directs innovators to ensure that their work is scientifically well grounded and prioritizes the interests of patients over the interests of other stakeholders. Opinion 1.2.11 further recognizes that ensuring ethical practice in the design and introduction of innovations does not, indeed cannot, rest with physicians alone; health care institutions and the profession have significant responsibilities to uphold medicine's defining commitment to patients.

Opinion 11.2.1, "Professionalism in Health Care Systems," defines the responsibilities of leaders in health care systems to promote physician professionalism and to ensure that mechanisms adopted to influence physician decision making are "designed in keeping with sound principles and solid scientific evidence," deployed fairly so that they "do not disadvantage identifiable populations of patients or physicians or exacerbate health care disparities." It similarly recognizes that institutional

leaders should ensure that when these mechanisms are deployed they are monitored to identify and respond to the effects they have on patient care.

Individual physicians, and the institutions within in which they practice, have a responsibility to be prudent stewards of the shared societal resources entrusted to them, addressed in Opinion 11.1.2, "Physician Stewardship of Health Care Resources." Even as they prioritize the needs and welfare of their individual patients, physicians have a responsibility to promote public health and access to care. They fulfill that responsibility by choosing the course of action that will achieve the individual patient's goals for care in the least resource intensive way feasible.

Finally, as Opinion 1.1.6, "Quality," directs, all physicians share a responsibility for promoting and providing care that is "safe, effective, patient centered, timely, efficient, and equitable." This should be understood to include a responsibility to adopt AI systems that have been demonstrated to improve quality of care and patients' experience of care.

For the most part, individual physicians will be consumers of AI systems developed by others. As individual end users, physicians cannot reasonably be expected to have the requisite expertise or opportunity to evaluate AI systems. They must rely on their institutions, or the vendors from whom they purchase AI systems, to ensure that those systems are trustworthy.

Nonetheless, physicians do have an important role to play in promoting fair, responsible use of well-designed AI systems in keeping with responsibilities already delineated in the AMA *Code of Medical Ethics* noted above. Their voice must be heard in helping to hold other stakeholders accountable for ensuring that AI systems, like other tools, support the goals and values that define the medical profession and to which individual practitioners are held. CEJA Report 4-JUN-21 outlines the kinds of assurances physicians should be able to expect from their institutions when a given AI system is proposed or implemented.

CONCLUSION

AI systems are already a fact of life in medicine and other domains; it would be naïve to imagine there will not be further rapid evolution of these technologies. Fidelity to patients requires that physicians recognize the ways in which AI systems can improve outcomes for their patients and the community and enhance their own practices. They should be willing to be reflective, critical consumers of well-designed AI systems, recognizing both the potential benefits and the potential downsides of using AI-enable tools to deliver clinical care or organize their practices.

The fact that existing guidance in the AMA *Code of Medical Ethics* already addresses fundamental issues of concern noted above, coupled with the pace and scope of continuing evolution of AI technologies, the council concludes that developing guidance specifically addressing augmented intelligence in health care is not the most effective response. Rather, the council believes that amending existing guidance to more clearly encompass AI will best serve physicians and the patients they care for.

As the council noted in CEJA Report 4-JUN-21, the implications of AI technologies, and more specifically, the exploitation of "big data" to drive improvements in health care, carries significant implications for patient privacy and confidentiality that warrant separate consideration. The council intends to address those implications separately in future deliberations.

RECOMMENDATION

In light of the foregoing, the Council on Ethical and Judicial Affairs recommend that Opinion 1.2.11, "Ethically Sound Innovation in Medical Practice"; Opinion 11.2.1, "Professionalism in Health Care Systems"; Opinion 11.1.2, "Physician Stewardship of Health Care Resources"; and Opinion 1.1.6, "Quality," be amended as follows and the remainder of this report be filed:

1. Opinion 1.2.11, Ethically Sound Innovation in Clinical Practice

Innovation in medicine can span a wide range of activities. ~~From~~ It encompasses not only improving an existing intervention, ~~to introducing an innovation in one's own clinical practice for the first time, to~~ using an existing intervention in a novel way, or translating knowledge from one clinical context into another but also developing or implementing new technologies to enhance diagnosis, treatment, and health care operations. Innovation shares features with both research and patient care, but it is distinct from both.

When physicians participate in developing and disseminating innovative practices, they act in accord with professional responsibilities to advance medical knowledge, improve quality of care, and promote the well-being of individual patients and the larger community. Similarly, these responsibilities are honored when physicians enhance their own practices by expanding the range of tools, techniques, ~~and~~ or interventions they ~~offer to patients~~ employ in providing care.

Individually, physicians who are involved in designing, developing, disseminating, or adopting innovative modalities should:

(a) Innovate on the basis of sound scientific evidence and appropriate clinical expertise.

(b) Seek input from colleagues or other medical professionals in advance or as early as possible in the course of innovation.

(c) Design innovations so as to minimize risks to individual patients and maximize the likelihood of application and benefit for populations of patients.

(d) Be sensitive to the cost implications of innovation.

(e) Be aware of influences that may drive the creation and adoption of innovative practices for reasons other than patient or public benefit.

When they offer existing innovative diagnostic or therapeutic services to individual patients, physicians must:

(f) Base recommendations on patients' medical needs.

(g) Refrain from offering such services until they have acquired appropriate knowledge and skills.

(h) Recognize that in this context informed decision making requires the physician to disclose:

(i) how a recommended diagnostic or therapeutic service differs from the standard therapeutic approach if one exists;

(ii) why the physician is recommending the innovative modality;

(iii) what the known or anticipated risks, benefits, and burdens of the recommended therapy and alternatives are;

(iv) what experience the professional community in general and the physician individually has had to date with the innovative therapy;

(v) what conflicts of interest the physician may have with respect to the recommended therapy.

(i) Discontinue any innovative therapies that are not benefiting the patient.

(j) Be transparent and share findings from their use of innovative therapies with peers in some manner. To promote patient safety and quality, physicians should share both immediate or delayed positive and negative outcomes.

To promote responsible innovation, health care institutions and the medical profession should:

(k) Ensure that innovative practices or technologies that are made available to physicians meet the highest standards for scientifically sound design and clinical value.

(~~k~~l) Require that physicians who adopt ~~innovative treatment or diagnostic techniques~~ innovations into their practice have ~~appropriate~~ relevant knowledge and skills.

(~~l~~m) Provide meaningful professional oversight of innovation in patient care.

(~~m~~n) Encourage physician-innovators to collect and share information about the resources needed to implement their ~~innovative therapies~~ innovations safely, effectively, and equitably.

2. Opinion 11.2.1, Professionalism in Health Care Systems

Containing costs, promoting high-quality care for all patients, and sustaining physician professionalism are important goals. Models for financing and organizing the delivery of health care services often aim to promote patient safety and to improve quality and efficiency. However, they can also pose ethical challenges for physicians that could undermine the trust essential to patient-physician relationships.

Payment models and financial incentives can create conflicts of interest among patients, health care organizations, and physicians. They can encourage undertreatment and overtreatment, as well as dictate goals that are not individualized for the particular patient.

Structures that influence where and by whom care is delivered—such as accountable care organizations, group practices, health maintenance organizations, and other entities that may emerge in the future—can affect patients' choices, the patient-physician relationship, and physicians' relationships with fellow health care professionals.

Formularies, clinical practice guidelines, decision support tools that rely on augmented intelligence, and other ~~tools~~ mechanisms intended to influence decision making, may impinge

on physicians' exercise of professional judgment and ability to advocate effectively for their patients, depending on how they are designed and implemented.

Physicians in leadership positions within health care organizations and the profession should ~~ensure that practices for financing and organizing the delivery of care~~:

(a) Ensure that decisions to implement practices or tools for organizing the delivery of care ~~A~~are transparent and reflect input from key stakeholders, including physicians and patients.

(b) ~~Reflect input from key stakeholders, including physicians and patients~~.

(b) Recognize that over reliance on financial incentives or other tools to influence clinical decision making may undermine physician professionalism.

(c) Ensure ~~ethically acceptable incentives~~ that all such tools:

(i) are designed in keeping with sound principles and solid scientific evidence.

a. Financial incentives should be based on appropriate comparison groups and cost data and adjusted to reflect complexity, case mix, and other factors that affect physician practice profiles.

b. Practice guidelines, formularies, and ~~other~~ similar tools should be based on best available evidence and developed in keeping with ethics guidance.

c. Clinical prediction models, decision support tools, and similar tools such as those that rely on AI technology must rest on the highest-quality data and be independently validated in relevantly similar populations of patients and care settings.

(ii) are implemented fairly and do not disadvantage identifiable populations of patients or physicians or exacerbate health care disparities;

(iii) are implemented in conjunction with the infrastructure and resources needed to support high-value care and physician professionalism;

(iv) mitigate possible conflicts between physicians' financial interests and patient interests by minimizing the financial impact of patient care decisions and the overall financial risk for individual physicians.

(d) Encourage, rather than discourage, physicians (and others) to:

(i) provide care for patients with difficult to manage medical conditions;

(ii) practice at their full capacity, but not beyond.

(e) Recognize physicians' primary obligation to their patients by enabling physicians to respond to the unique needs of individual patients and providing avenues for meaningful appeal and advocacy on behalf of patients.

(f) ~~Are~~ Ensure that the use of financial incentives and other tools is routinely monitored to:

(i) identify and address adverse consequences;

(ii) identify and encourage dissemination of positive outcomes.

All physicians should:

(g) Hold physician-leaders accountable to meeting conditions for professionalism in health care systems.

(k) Advocate for changes ~~in health care payment and delivery models~~ how the delivery of care is organized to promote access to high-quality care for all patients.

3. Opinion 11.1.2, Physician Stewardship of Health Care Resources

Physicians' primary ethical obligation is to promote the well-being of individual patients. Physicians also have a long-recognized obligation to patients in general to promote public health and access to care. This obligation requires physicians to be prudent stewards of the shared societal resources with which they are entrusted. Managing health care resources responsibly for the benefit of all patients is compatible with physicians' primary obligation to serve the interests of individual patients.

To fulfill their obligation to be prudent stewards of health care resources, physicians should:

(a) Base recommendations and decisions on patients' medical needs.

(b) Use scientifically grounded evidence to inform professional decisions when available.

(c) Help patients articulate their health care goals and help patients and their families form realistic expectations about whether a particular intervention is likely to achieve those goals.

(d) Endorse recommendations that offer reasonable likelihood of achieving the patient's health care goals.

(e) Use technologies that have been demonstrated to meaningfully improve clinical outcomes to ~~C~~choose the course of action that requires fewer resources when alternative courses of action offer similar likelihood and degree of anticipated benefit compared to anticipated harm for the individual patient but require different levels of resources.

(f) Be transparent about alternatives, including disclosing when resource constraints play a role in decision making.

(g) Participate in efforts to resolve persistent disagreement about whether a costly intervention is worthwhile, which may include consulting other physicians, an ethics committee, or other appropriate resource.

Physicians are in a unique position to affect health care spending. But individual physicians alone cannot and should not be expected to address the systemic challenges of wisely managing health care resources. Medicine as a profession must create conditions for practice that make it feasible for individual physicians to be prudent stewards by:

(h) Encouraging health care administrators and organizations to make cost data transparent (including cost accounting methodologies) so that physicians can exercise well-informed stewardship.

(i) Advocating that health care organizations make available well-validated technologies to enhance diagnosis, treatment planning, and prognosis and support equitable, prudent use of health care resources.

(~~i~~j) Ensuring that physicians have the training they need to be informed about health care costs and how their decisions affect resource utilization and overall health care spending.

(jk) Advocating for policy changes, such as medical liability reform, that promote professional judgment and address systemic barriers that impede responsible stewardship.

4. Opinion 1.1.6, Quality

As professionals dedicated to promoting the well-being of patients, physicians individually and collectively share the obligation to ensure that the care patients receive is safe, effective, patient centered, timely, efficient, and equitable.

While responsibility for quality of care does not rest solely with physicians, their role is essential. Individually and collectively, physicians should actively engage in efforts to improve the quality of health care by:

(a) Keeping current with best care practices and maintaining professional competence.

(b) Holding themselves accountable to patients, families, and fellow health care professionals for communicating effectively and coordinating care appropriately.

(c) Using new technologies and innovations that have been demonstrated to improve patient outcomes and experience of care, in keeping with ethics guidance on innovation in clinical practice and stewardship of health care resources.

(~~c~~d)Monitoring the quality of care they deliver as individual practitioners—e.g., through personal case review and critical self-reflection, peer review, and use of other quality improvement tools.

(Modify HOD/CEJA policy)

Fiscal Note: Less than $500

REFERENCES

1. American Medical Association, Council on Ethical and Judicial Affairs. *Report 4-JUN-21: Augmented Intelligence & the Ethics of Innovation in Medicine*. Available at [proceedings, JUN 21 special mtg, when posted]
2. Matheny M, Israni ST, Ahmed M, Whicher D, eds. *Artificial Intelligence in Health Care: The Hope, the Hype, the Promise, the Peril*. Washington, DC: National Academy of Medicine. Available at https://nam.edu/artificial-intelligence-special-publication/. Accessed April 12, 2021.
3. Fjeld J, Achten N, Hilligoss H, Nagy AC, Srikumar M. *Principled Artificial Intelligence: Mapping Consensus in Ethical and Rights-based Approaches to Principles for AI*. Berkman Klein Center for Internet & Society. Research Publication No. 2020-1 January 15, 2020. Available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3518482. Accessed April 12, 2021.
4. High-Level Expert Group on Artificial Intelligence. *Ethics Guidelines for Trustworthy AI*. April 2019. Available at https://digital-strategy.ec.europa.eu/en/library/ethics-guidelines-trustworthy-ai. Accessed April 12, 2021.
5. Gradient Institute. *Practical Challenges for Ethical AI*. 2019. Available at https://gradientinstitute.org/docs/gradientinst-whitepaper.pdf. Accessed April 12, 2021.
6. Braun M, Hummel P, Beck S, Dabrock P. Primer on an ethics of AI-based decision support systems in the clinic. *J Med Ethics.* 2020;0:1–8.
7. Crigger EJ, Reinbold K, Hanson C, et al. Trustworthy augmented intelligence in health care. Under peer review, *Journal of Medical Systems*.

REPORT OF THE COUNCIL ON ETHICAL AND JUDICIAL AFFAIRS*

CEJA Report 1-A-12

Subject: Physician Stewardship of Health Care Resources

Presented by: Sharon P. Douglas, MD, Chair

Referred to: Reference Committee on Amendments to Constitution and Bylaws (Jerome C. Cohen, MD, Chair)

US health care spending reached 17.6 percent of gross domestic product (GDP) in 2009,[1] almost double that of other industrialized countries.[2] This level of spending presents an enormous burden for federal and state governments, businesses, families, and individuals.[2] The high cost of health care imperils access to care,[3,4] and access is likely to worsen if costs continue to outpace incomes.[5]

This report by the Council on Ethical and Judicial Affairs (CEJA) examines the role physician treatment decisions play in overall health care costs and analyzes physicians' obligation to manage health care resources wisely. It provides ethical guidance to support physicians in making fair, prudent, cost-conscious decisions for care that meet the needs of individual patients and help to ensure availability of health care for others.

The focus of the report is on physicians' recommendations and decisions in everyday situations that are often overlooked, in which physicians' choice of one among several reasonable alternatives can affect the availability of resources across the community of patients or the aggregate cost of care in the community. (For example, ordering a serum pregnancy test instead of a urine pregnancy test, which costs substantially more but for the majority of patients does not provide significant additional benefit.)

These everyday decisions are distinct from triage decisions, in which multiple patients compete for a clearly defined set of limited resources—e.g., in a pandemic or natural disaster. Decision making under such conditions has been discussed at some length in the literature and is addressed in Opinion E-9.067, "Physician Obligation in Disaster Preparedness and Response" (AMA Policy Database). Everyday choices are also distinct from "high stakes" decisions about interventions that can mean life or death for patients or forestall extremely poor outcomes, such as decisions to initiate mechanical ventilation in emergent circumstances when the patient's prognosis is uncertain. Arguably, in situations when there is significant risk of harm, cost considerations, if they play a role at all, are better addressed through collectively designed policy than left to individual decisions physicians must grapple with at the bedside.

TREATMENT DECISIONS, HEALTH CARE SPENDING & BENEFIT TO PATIENTS

Numerous factors drive the overall cost of health care, many of which are beyond the control of individual physicians. These include high administrative costs;[2,7] population trends (such as aging or obesity[2]); malpractice liability costs; patient expectations and demands; and high prices of drugs, devices, and hospital and professional services.[2,7] Other cost drivers, however, such as extensive use

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of new technologies[8] and high intensity of services provided at each patient encounter,[2,7] are influenced by physician choices.

Physician orders and recommendations play a significant role in determining which services and how many services patients receive; without a physician's assent clinical orders or policies generally cannot be implemented.[9] To this extent, physicians have an opportunity to affect health care spending overall. Documented regional variations in Medicare spending are explained in part by variations in physician practice patterns.[10,11] Higher spending regions and institutions have been shown to have higher intensity care, greater use of hospitals and intensive care units, and more utilization of specialists, tests, and minor procedures.[12-14] Practice differences seem to be less for interventions for which there are established guidelines, and more for the "discretionary" interventions that physicians recommend.[11]

More intensive and/or costlier services do not necessarily lead to better health outcomes.[12-17] In fact, lower spending regions appear to have better outcomes on certain measures, such as those developed by the Medicare Quality Improvement Organization.[8,10,15,17,18] In many domains, the services that yield the greatest benefits to health are not the factors that drive up costs, and the services that tend to drive up costs are not the ones that yield the greatest benefits to health, at least when measured at the population level.[18]

STEWARDSHIP AS AN OBLIGATION OF PROFESSIONAL ETHICS

Stewardship refers to the obligation to provide effective medical care through prudent management of the public and private health care resources with which physicians are entrusted.[6] This obligation flows both from the influence that physician decisions and recommendations have on health care costs and from core ethical obligations of physicians as professionals.

Physicians' primary ethical obligation, of course, is to protect and promote the well-being of individual patients (Principle VI, AMA Principles of Medical Ethics). However, it has long been recognized that physicians also have a responsibility to patients in general to promote the public health (Principle VII) and access to care for all patients (Principle IX).

Historically, medicine as a learned profession has been understood to have a social responsibility to use knowledge and skills to enhance the common good,[21-23,24] including obligations to protect public health and safety, even if this might require restricting the liberties of individual patients (Opinion E-2.25, "The Use of Quarantine and Isolation as Public Health Measures"; Opinion E-2.24, "Impaired Drivers and Their Physicians"). Similarly, the *Code of Medical Ethics* recognizes that without compromising their primary obligation, physicians should be conscious of the costs of care (Opinion E-2.09, "Costs"); that they should consider the needs of broader patient populations (Opinion E-8.054, "Financial Incentives and the Practice of Medicine"); and that they should not provide treatment that is "willfully excessive" (Opinion E-4.04, "Economic Incentives and Levels of Care"). The profession's authority rests on fulfillment of these commitments.[25]

Arguments that physicians should never allow considerations other than the welfare of the patient before them to influence their professional recommendations and treatment[19,20] do not mesh with the reality of clinical practice. Physicians regularly work with a variety of limits on care: clinical practice guidelines, patient preferences, availability of certain services, the benefits covered by a patient's insurance plan, and the time physicians and nurses can spend caring for a patient all influence what interventions physicians recommend and what care they provide.

Physicians also regularly confront the effects of uneven or unfair distribution of health care resources in their day-to-day practice. They express moral distress about having to provide different levels of care

for those who are uninsured or grossly underinsured than they provide for patients with adequate insurance coverage. They witness the adverse consequences for their patients when needed resources (e.g., particular specialists, hospital beds, imaging equipment) are too scarce.[27] As frontline providers, physicians are in a position to identify unacceptably restricted resources in their community.

MAKING COST-CONSCIOUS DECISIONS

There is broad consensus that physicians should first take medical need into consideration when making recommendations and providing care. Physicians are expected to refrain from offering or acceding to patients' requests for interventions or diagnostic tests that are medically unnecessary (E-2.19, "Unnecessary Medical Services") or that cannot reasonably be expected to benefit the patient (E-2.035, "Futile Care"). Physicians are likewise expected to provide—or advocate vigorously for—interventions that will clearly benefit the patient or clearly avert significant harm. However, between these two ends of the spectrum, physicians face decisions about whether to recommend or provide interventions that offer some increment of benefit, but which perhaps pose additional risks or substantial additional financial cost.[29] It is in this grey zone of marginal benefit that principles for wise stewardship should help shape decisions about care.

Making cost-conscious decisions is not far removed from the professional judgments physicians already make. Physicians routinely decide whether interventions with small benefits are worthwhile, whether diagnostic tests need to be STAT or routine, whether a patient needs to be seen urgently or routinely, whether the public health impact of a broad spectrum antibiotic is justified for a certain infection, and whether patient requests for expensive interventions are justified.[30-31] Reasonable criteria to guide cost-conscious decisions in routine care include the likelihood of benefit for the patient and the anticipated degree and duration of benefit, including change in quality of life (E-2.03, "Allocation of Limited Medical Resources").

Physicians should be aware of the relative strength of the evidence for anticipated benefits. Well-designed clinical practice guidelines, such as those available through the National Guideline Clearinghouse,[32] or quality measures, such as those developed by the AMA-convened Physician Consortium for Performance Improvement® (PCPI™),[33] should provide a baseline for treatment recommendations.

But guidelines should never simply supplant professional judgment. Physicians have a responsibility to argue for the course of care they judge most appropriate for the individual patient based on the patient's unique clinical circumstances (e.g., E-8.13, "Managed Care"; E-8.135, "Cost Containment Involving Prescription Drugs in Health Care Plans"). Even the most evidence-based guidelines cannot take into account the tremendous variety physicians encounter caring for individual patients.[28] A guideline that suggests a particular service is not "needed" may be well justified for most patients, but physicians will inevitably care for patients who qualify as legitimate, justifiable exceptions, clinically and ethically.

Similarly, for a specific patient, guidelines or standards of care might describe services that are unnecessary because of individual patient details. For example, current quality measures stipulate the frequency of lipid testing and use of lipid-lowering medication for diabetics. However, as is often mentioned in guidelines, co-morbid conditions (e.g., a life-limiting disease not related to diabetes or heart disease) can justify less testing or discontinuation of medication. Conversely, younger diabetics, who have more years in which to develop end-organ damage, might be treated more aggressively in many ways than older ones, sometimes more aggressively than guidelines (or quality measures) describe for the "average" diabetic. Likewise, screening that may be generally recommended for various cancers (especially slowly developing cancers) may have less clinical value for patients of advanced age or who have significant co-morbidities than for younger or healthier patients, for whom

earlier detection and intervention may offer greater clinical benefit or may be better able to bear the burdens of treatment.[29]

When guidelines are not available, determining whether a particular intervention is worthwhile for an individual patient necessarily rests heavily on physicians' professional judgment. Such determinations may differ from patient to patient and for an individual patient as his or her clinical situation changes. To the extent that physicians' primary task at each patient encounter is to heal, physicians should judge the necessity of an intervention based on its ability to cure, to relieve suffering, or to cultivate health—but always to care.[34]

While the default presumption is that physicians should honor patients' wishes with respect to treatment (E-10.01, "Fundamental Elements of the Patient-Physician Relationship"), patient values and preferences should be balanced against considerations of stewardship. Patients with health care insurance rarely face the entire cost of their care, and in any individual situation they may not recognize or value the need to restrain spending. When patients or their families argue for an intervention the physician deems to offer marginal benefit, physicians should strive to help them articulate goals for care and to help them form realistic expectations about whether the intervention is likely to achieve those goals.

For example, a particular patient or family might request off-label use of an expensive chemotherapeutic agent as an adjunct to standard therapy.[35] Physicians should be mindful that patient expectations for particular treatments or procedures can be shaped by many influences, including the advice of family and friends, online information, direct-to-consumer advertising,[36,37] and, of course, a wish to do "something" that might increase their overall survival. Many of these influences are not tailored to the patient's immediate clinical needs, and naturally most are not sensitive to considerations of cost or fairness.

Physicians' knowledge of what care their patients need (and how urgently they may need it), along with their firsthand experience with the consequences for patients when those needs are not met, means physicians can well appreciate the importance of allocating health care resources responsibly. In making treatment recommendations for individual patients, physicians should be aware of and consider the level of resources needed to achieve the patient's goals. When alternative courses of action offer similar likelihood and degree of benefit but require different levels of resources, choosing the less costly course of action can help preserve resources for the benefit of patients overall (E-8.135; E-8.054, "Financial Incentives and the Practice of Medicine").

Physicians should take the time to be transparent and honest in counseling patients about alternatives—including less costly care—instead of deferring to patients' requests for care that are not consistent with the physician's considered professional judgment. Honesty and transparency are critical to maintaining patient trust; patients are vulnerable and rely heavily on the physician's competence and good will.[38] In today's busy practice environment, it may be expedient for physicians simply to provide what a patient asks for regardless of medical need. Yet such expediency does not serve patient interests well, because it often does not lead to more efficient or higher quality care.

Physicians should make all reasonable efforts to resolve persistent disagreements about whether a particular treatment or procedure is cost worthy in the patient's situation. Physicians should consider consulting with a colleague or seeking an ethics consultation, for instance. If all efforts to resolve the disagreement fail, the patient may wish to seek care elsewhere. While it may be justifiable to terminate the patient-physician relationship, this should be a last resort and appropriate measures should be taken to ensure continuity of care (Opinions E-8.115, "Termination of the Patient-Physician Relationship"; E-8.11, "Neglect of Patient"; E-10.01, "Fundamental Elements of the Patient-Physician

Relationship").[39-41] Physicians are under no obligation to provide interventions simply because patients request them (E-2.035).

OBSTACLES TO PHYSICIAN STEWARDSHIP: A ROLE FOR THE PROFESSION

Many physicians generally recognize an obligation to distribute limited resources responsibly, but struggle with when and how to take this into account when considering individual treatment decisions.[42] They face a variety of obstacles in trying to fulfill the ethical obligation to be prudent stewards, including lack of knowledge about the costs of interventions and the impact of their individual recommendations and decisions, the complexity of the systems in which health care is delivered, and concerns about potential medical liability if they fail to order a test or intervention.[43] Individual physicians cannot and should not be expected to resolve the challenges of wisely managing health care resources and rising health care costs solely "at the bedside." Medicine as a profession has an equal obligation to help create conditions for practice that make it feasible for physicians to be prudent and trustworthy stewards.

Physicians need to be knowledgeable about health care costs and how their individual decisions can affect overall health care spending (Policy H-155.998, "Voluntary Cost Containment"). Education for medical students and practicing physicians alike should include discussion of costs. Physicians also need to understand how their individual decisions affect institutional resources in the aggregate. Health care administrators and organizations should make costs transparent to participating physicians to enable them to make well-informed decisions as stewards.

Other systemic factors, such as the perceived need to practice "defensive medicine," also work to undermine stewardship. The professional responsibility and ethical duty to practice medicine in a manner that is respectful of the finite nature of health care resources does not confer a legal duty to withhold or administer any particular treatment or diagnostic procedure. Rather, responsible stewardship upholds the principle that clinical expertise should be integrated with the best information from scientifically based, systematic research and applied in light of the patient's values and circumstances.[26] Medicine as a profession has an important role to play in advocating for policies that address concerns about medical liability and other systemic factors that impede responsible stewardship.

Every physician must be able to trust that the colleagues to whom he or she refers patients will exercise prudent stewardship in making recommendations about a patient's care. Given the complex structures in which health care is now delivered, responsible stewardship by one will have little overall effect if responsible stewardship is not practiced by all. Medicine must commit itself to nurturing a culture of accountability, in which health care expenditures are directed toward providing high quality care to meet the needs of individual patients in ways that preserve resources to enable physicians to better meet the needs of all.

RECOMMENDATION

The Council on Ethical and Judicial Affairs recommends that the following be adopted and the remainder of this report be filed:

> Physicians' primary ethical obligation is to promote the well-being of individual patients. Physicians also have a long-recognized obligation to patients in general to promote public health and access to care. This obligation requires physicians to be prudent stewards of the shared societal resources with which they are entrusted. Managing health care resources responsibly for the benefit of all patients is compatible with physicians' primary obligation to serve the interests of individual patients.

To fulfill their obligation to be prudent stewards of health care resources, physicians should:

(a) Base recommendations and decisions on patients' medical needs;

(b) Use scientifically grounded evidence to inform professional decisions when available;

(c) Help patients articulate their health care goals and help patients and their families form realistic expectations about whether a particular intervention is likely to achieve those goals;

(d) Endorse recommendations that offer reasonable likelihood of achieving the patient's health care goals;

(e) Choose the course of action that requires fewer resources when alternative courses of action offer similar likelihood and degree of anticipated benefit compared to anticipated harm for the individual patient, but require different levels of resources;

(f) Be transparent about alternatives, including disclosing when resource constraints play a role in decision making; and

(g) Participate in efforts to resolve persistent disagreement about whether a costly intervention is worthwhile, which may include consulting other physicians, an ethics committee, or other appropriate resource.

Physicians are in a unique position to affect health care spending. But individual physicians alone cannot and should not be expected to address the systemic challenges of wisely managing health care resources. Medicine as a profession must create conditions for practice that make it feasible for individual physicians to be prudent stewards by:

(h) Encouraging health care administrators and organizations to make cost data transparent (including cost accounting methodologies) so that physicians can exercise well-informed stewardship;

(i) Ensuring that physicians have the training they need to be informed about health care costs and how their decisions affect overall health care spending; and

(j) Advocating for policy changes, such as medical liability reform, that promote professional judgment and address systemic barriers that impede responsible stewardship.

(New HOD/CEJA Policy)

Fiscal Note: Less than $500 to implement.

REFERENCES

1. Centers for Medicare & Medicaid Services, Office of the Actuary, National Health Statistics Group; and U.S. Department of Commerce, Bureau of Economic Analysis and Bureau of the Census. *National Health Expenditure Data: Historical.* 2009.
2. Peterson C, Burton R. U.S. *Health Care Spending: Comparison with Other OECD Countries*. Washington, D.C.: Congressional Research Service; 2007.
3. Schoen C, Doty MM, Collins SR, Holmgren AL. Insured but not protected: how many adults are underinsured: *Health Aff (Millwood)*. Jan-Jun 2005;Suppl Web Exclusives: W5-289-W285-302.
4. Bodenheimer T. High and rising health care costs. Part 1: seeking an explanation. *Ann Inter Med.* May 17 2005;142(10):847-854.
5. Centers for Medicare & Medicaid Services. *National Health Expenditure Projections 2008-2018: Forecast Summary* 2007.
6. Larkin GL, et al. Resource utilization in the emergency department: the duty of stewardship. *J Emerg Med*. 1998;499-503.
7. Bodenheimer T. High and rising health care costs. Part 3: the role of health care providers. *Ann Intern Med*. Jun 21 2005;142(12 Pt 1):996-1002.
8. Bodenheimer T. High and rising health care costs. Part 2: technologic innovation. *Ann Intern Med*. Jun 7 2005;142(11):932-937.
9. Pellegrino E, Thomasma D. *The Virtues in Medical Practice*. New York: Oxford University Press; 1995.
10. Fisher ES, Bynum JP, Skinner JS. Slowing the growth of health care costs-lessons from regional variation. *N Engl J Med*. Feb 26 2009;360(9):849-852.
11. Sirovich B, Gallagher PM, Wennberg DE, Fisher ES. Discretionary decision making by primary care physicians and the cost of U.S. health care. *Health Aff (Millwood)*. May-Jun 2008;27(3):813-823.
12. Yasaitis L, Fisher ES, Skinner JS, Chandra A. Hospital quality and intensity of spending: is there an association? *Health Aff (Millwood)*. Jul-Aug 2009;28(4):w566-572
13. Fisher ES, Wennberg DE, Stikel TA, Gottlieb DJ, Lucas FL, Pinder EL. The implications of regional variations in Medicare spending. Part 1: the content, quality, and accessibility of care. *Ann Intern Med*. Feb 18 2003;138(4):273-287.
14. Fisher ES, Wennberg DE, Stikel TA, Gottlieb DJ, Lucas FL, Pinder EL. The implications of regional variations in Medicare spending. Part 2: health outcomes and satisfaction with care. *Ann Intern Med*. Feb 18 2003;138(4):288-298.
15. Gawande, A. The cost conundrum: What a Texas town can teach us about health care. *The New Yorker*. Jun 1 2009.
16. Fischer MA, Avom J. Economic implications of evidence-based prescribing for hypertension: can better care cost less? *JAMA*. Apr 21 2004;291(15):1850-1856.
17. Baiker K, Chandra A. Medicare spending, the physician workforce, and beneficiaries' quality of care. *Health Aff (Millwood)*. 2004;Suppl Web Exclusives:w184-197.
18. Skinner JS, Staiger DO, Fisher ES. Is technological change in medicine always worth it? The case of acute myocardial infarction. *Health Aff (Millwood)*. Mar-Apr 2006;25(2):w34-47.
19. Pellegrino ED. The commodification of medical and health care: the moral consequences of a paradigm shift from a professional to a market ethic. *J Med Philos*. Jun 1999;24(3):243-266.
20. Lauridsen S. Administrative Gatekeeping – a third way between unrestricted patient advocacy and bedside rationing. *Bioethics*. Apr 11 2007.
21. House of Delegates of the American Medical Association. Declaration of Professional Responsibility: Medicine's Social Contract with Humanity; December 4 2001.

22. Medical professionalism in the new millennium: a physician charter. *J Am Coll Surg*. Jan 2003;196(1):115-118.
23. AMA Council on Ethical and Judicial Affairs. *Code of Medical Ethics of the American Medical Association*. 2008-2009 ed. Chicago, IL: American Medical Association; 2008.
24. American Medical Association. *Code of Medical Ethics of the American Medical Association*. 1847.
25. Sullivan W. What is left of professionalism after managed care? *Hastings Cent Rep*. 1999;29(2):7-13.
26. Goold SG. Doctors' views on rationing: commentary. Slides presented to the Council for Ethical and Judicial Affairs of the American Medical Association. June 2009; Chicago, IL.
27. Institution of Organized Medicine. Knowing What Works in Health Care: A Roadmap for the Nation. Washington, DC: National Academies Press;2008.
28. O'Reilly K. Informed consent: Hospitals explore personalizing risks. *A Med News*. May 17 2010
29. Quanstrum KH, Hayward RA. Lessons from the mammography wars. *NEJM*. Sep 9 2010;363(11):1076-1079.
30. Hurst SA, Danis M. A framework for rationing by clinical judgment. *Kennedy Inst Ethics J*. Sep 2007;17(3):247-266
31. Jain MK. For doctors, rationing care is standard practice. *The Washington Post*. Aug 5 2009.
32. Agency for Healthcare Research and Quality. National Guideline Clearinghouse: Mission Statement. http://www.guideline.gov/about/mission.aspx.
33. Physician Consortium for Performance Improvement. http://www.ama-assn.org/ama/pub/physician-resources/clinical-practice-improvement/clinical-quality/physician-consortium-performance-improvement.shtml.
34. Pellegrino ED. Professionalism, profession and the virtues of the good physician. *Mt Sinai J Med*. Nov 2002;69(6):378-384.
35. Fojo T, Grady C. How much is life worth: cetuximab, non-small cell lung cancer, and the $440 billion question. *J Natl Cancer Inst*. Aug 5 2009;101(15):1044-1048.
36. Lurie P. DTC Advertising Harms Patients and Should Be Tightly Regulated. *J Law Med Ethics*. Fall 2009;37(3):444-450.
37. Mintzes B, Barer ML, Kravitz RL, et al. Influence of direct to consumer pharmaceutical advertising and patients' requests on prescribing decisions: two site cross sectional survey. *BMJ*. Feb 2 2002;324(7332):278-279.
38. Goold SD, Lipkin M. The Doctor-Patient Relationship: Challenges, Opportunities, and Strategies. *Journal of General Internal Medicine*. 1999;14(S1):26-33.
39. Council on Ethical and Judicial Affairs. Opinion 8.11, Neglect of Patient. *Code of Medial Ethics of the American Medical Association*. 2008-2009 ed. Chicago, IL: American Medical Association; 2008.
40. Council on Ethical and Judicial Affairs. Opinion 8.115, Termination of the Physician-Patient Relationship. *Code of Medial Ethics of the American Medical Association*. 2008-2009 ed. Chicago, IL: American Medical Association; 2008.
41. Council on Ethical and Judicial Affairs. Opinion 10.01, Fundamental Elements of the Patient-Physician Relationship. *Code of Medial Ethics of the American Medical Association*. 2008-2009 ed. Chicago, IL: American Medical Association; 2008.
42. Campbell EG, Regan S, Gruen RL, et al. Professionalism in medicine: results of a national survey of physicians. *Ann Intern Med*. Dec 4 2007;147(11):795-802.
43. Wynia MK, Hotze T, Clement L, Allen A, Wicher J, Tomaszewski KJ. How do physicians think about stewardship in health care? A qualitative national study. Presented at: Society of General Internal Medicine Annual Meeting; May 9, 2011; Phoenix, AZ.