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AMA CODE SAYS: PEER-REVIEWED ARTICLE

Which Values Should Guide Evidence-Based Practice?

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Abstract
This article draws on opinions in the AMA *Code of Medical Ethics* and applies them to evidence-based practice.

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Evidence in Clinical Practice

Prior to the emergence and availability of evidence-based reviews, physicians and patients made decisions based on anecdotal data, opinion, experience, judgment, conjecture, and conventional wisdom.[1,2] In 1982, the first textbook describing the methodology of translating biomedical science into clinical practice, *Clinical Epidemiology: The Essentials*,[3] set the stage for what would eventually become what we now call evidence-based medicine (EBM).[1] EBM incorporates the best available scientific evidence when making decisions about an individual patient's care.[4] In the years since the adoption of EBM, it has become not only the clinical standard of care, but also an ethical expectation.[5]

The age-old adage that medicine is both a science and an art has been strengthened by the emergence of EBM; however, questions remain regarding how to elevate the science without sacrificing the art of medicine, the latter of which includes the clinician's compounding of clinical experience, intuition, knowledge of the patient and their preferences and goals, and even the social landscape through which the patient presents. This article explores the ethical issues clinicians face in clinical practice when combining EBM and the art of medicine during medical decision-making. Additionally, this article offers practical clinical recommendations for how to overcome these common ethical dilemmas.

Applying EBM to Patients

Practicing EBM raises several ethical challenges. The first pertains to balancing the science and art of medicine when making evidence-based decisions about patients' care or key communications to patients. Incorporation of clinical expertise with science is important because using only science to make medical decisions fails to take the patient's preferences and values into consideration. Indeed, the art of medicine refers to a patient-centered approach that includes observing and listening to patients and respecting patients' values, culture, and opinions rather than seeing patients solely as diseased persons in need of a cure.[6] While seemingly straightforward, the caveat that practicing medicine requires an established relationship between clinicians and patients highlights the imbalance in the science-focused approach and that it is the "art" aspect of medicine that resolves it.

The idea of medical practice as a balance of science and art can be better understood through the works and influence of Sir William Osler, a Canadian physician whose legacy on the teaching and practice of medicine continues to influence modern practices, including evidence-based technique. In the context of medicine's growing "biologized view of the sick person,"[7] the quotation attributed to Osler, "The good physician treats the disease, the great physician treats the patient with the disease," can be interpreted as a statement recognizing the need to holistically evaluate a patient and encouraging the continued practice of the ancient Greek-inspired art of observation within medicine.[7,8]

One challenge of balancing scientifically promising or evidence-based care options with a patient's values and opinions has to do with how to manage care of patients who ask for treatments or interventions that are not evidence based or who refuse evidence-based treatments or interventions. Clinicians have a duty to respect patient autonomy, which entails that patients or their surrogates should consent to care they receive. To express respect for a patient's autonomy, though, is not to blindly agree with a patient's decisions, as clinicians have additional ethical responsibilities to balance autonomy and evidence-based care and, in some cases, must adhere to political and legal boundaries. Clinicians are then faced with the challenge of deciding when and if it is ethically acceptable to offer or withhold an evidence-based treatment or procedure to support patient autonomy.

What Does the *Code* Say About Evidence?

The American Medical Association (AMA) *Code of Medical Ethics* recognizes that high-quality medical decisions require physicians to practice both the science and the art of medicine. Opinion 5.5, "Medically ineffective interventions," states: "physicians should only recommend and provide interventions that are medically appropriate—i.e., scientifically grounded—and that reflect the physician's considered medical judgment about the risks and likely benefits of available options in light of the patient's goals for care."[9] When providing recommendations, a physician has a "primary ethical obligation … to promote the well-being of individual patients."[10] However, this obligation can conflict with a physician's ethical duty to use "best available evidence" in instances when the patient or their surrogate requests a treatment or intervention that is not evidence based or when an evidenced-based treatment or intervention is refused.[11] In these instances, the AMA *Code* offers the guidance that "[p]hysicians are not required to offer or to provide interventions that, in their best medical judgment, cannot reasonably be expected to yield the intended clinical benefit or achieve agreed-on goals for care."[9] Importantly, the AMA *Code* recognizes that "respecting patient autonomy does not mean that patients should receive specific interventions simply because they (or their surrogates) request them."[9] Conversely, the AMA *Code* explicitly states that "a patient who has decision-making capacity may accept or refuse any recommended medical intervention."[12]

Applying the AMA *Code* in Practice

How to balance the science and art of medicine when making evidence-based decisions. The AMA *Code* uses the phrases “the physician’s considered medical judgment” and “best medical judgment”[9] to describe the standard for making medical recommendations in clinical practice. Although it is the standard of care and an ethical expectation to use the best available evidence— including by referencing up-to-date, evidence-based clinical practice guidelines—evidence alone is not definitive because the results of research studies are interpretations of aggregate data that may change based upon study design, methodology, participant sample, and analysis methods. Therefore, reasonable and intelligent people may disagree on interpretations of the data and the generalizability of these interpretations for use with their individual patients.[2] Thus, medical judgment goes beyond merely identifying the best available evidence and requires that the clinician understand the patient’s preferences, values, and goals of medical care.[2,13] Put differently, the process by which clinicians synthesize generalized knowledge garnered from EBM with clinical experience and skills and with individual patients’ preferences, values, and medical care goals makes both science and art inherent to medical judgment.

How to manage care of patients who ask for treatments or interventions that are not evidence based. The patient-clinician relationship is a mutual relationship founded upon trust, and while the goal of the relationship is to provide beneficial care to the patient, both parties have their own obligations and rights. Thus, when a patient asks for a treatment or intervention that is not evidence based, approval or denial of the request requires balancing patient and clinician autonomy. First, while clinicians have the ethical obligation to respect patient autonomy, they are not ethically obligated to deliver care that will not have a reasonable chance of benefiting their patient. Furthermore, in the event that acquiescing to requests for treatments or interventions that are not evidence based might place the patient’s or the general publics’ health at risk, the ethical obligation to prevent harm warrants a clinician’s decision to deny these requests. To preserve the medical judgment of physicians with the intention of supporting the safety and well-being of patients and the public, AMA policy recommends that physicians maintain their autonomy and have final say regarding the delivery of high-quality patient care, including by determining which diagnostic tests to run, whether a patient should be hospitalized, when interventions become extraordinary, what treatment methodology to apply, and when it is appropriate to terminate the patient-physician relationship.[13]

This recommendation is not in lieu of respecting patient autonomy and does not ignore the art of medicine, as developing and agreeing upon a care plan is a collaborative effort between clinicians and patients or surrogates with the prioritization of their consent. Rather, this recommendation balances the art and science of medicine via the physician’s using science and evidence to safeguard a patient based upon holistic assessment of the patient and their needs. The AMA *Code* also recommends that physicians explain their rationale for not offering the requested intervention or treatment to the patient and offer an alternative if appropriate. Moreover, the AMA *Code* addresses the importance of transparency in maintaining trust, which is essential to the patient-physician relationship.[14] Therefore, if a patient suggests a treatment or intervention that a physician disapproves of using their medical judgment, then the physician should provide information about all other appropriate treatment options, including potential risks and benefits.[14]

How to manage care of patients who refuse evidence-based treatments or interventions. Although clinicians have decision-making authority for the care they choose to deliver, this charge must be balanced with the ethical obligation to obtain informed consent for medical treatment from the patient or their surrogate when the patient lacks decision-making capacity. Obtaining informed consent for treatment requires that the clinician inform the patient about the best available evidence, including treatment options' limits and benefits, so that the patient can determine if they are willing to assume the risk of harm in exchange for the potential benefit of treatment. If the patient has capacity and has been appropriately informed, they have the legal and ethical right to refuse all medical treatments or interventions, even those that may preserve or prolong their life. Although a patient has the right to refuse treatments and interventions, it is important to take the time to identify if there are any underlying reasons for the refusal—for example, fear, a prior bad experience, or a misunderstanding about the nature of the disease or treatment—that can be addressed through further conversation and support.

In practice, it is imperative to first determine whether a patient retains the capacity to make decisions regarding their health. Such determinations will rely heavily on the patient's ability to understand—and to communicate their understanding of—the risks and benefits associated with treatment or interventions.[15] To that same end, assessing a patient's decision-making capacity is critical to initiating the informed consent conversation that will outline the best available evidence, again including treatment options' potential limitations and benefits. Should patient capacity be determined to be limited, then health decisions, including those requiring informed consent, should be made by the appointed surrogate. However, if the patient maintains capacity but refuses evidenced-based treatment, then the clinician may ask questions to ascertain whether the reason for refusal could be addressed in other ways, such as through a goals-of-care conversation or by providing additional support. It is nevertheless important to remember that patients with capacity, or surrogates representing patients with limited capacity, have the legal and ethical right to refuse any treatment or intervention. In cases in which refusal of a treatment or an intervention would result in patient suffering or even death, physicians are encouraged to consult with a palliative care specialist to assist with the goals-of-care discussion or to provide support to the patient and family in their decision to refuse.

Conclusion

Application of EBM in clinical practice raises several ethical challenges, including how to balance the science and art of medicine when making evidence-based decisions for patients, how to manage patients who ask for treatments or interventions that are not evidence based, and how to manage patients who refuse treatments or interventions that are based on evidence. To balance the science and art of medicine, clinicians should synthesize the generalized knowledge garnered from EBM with both their clinical knowledge and skills and the preferences, values, and goals of the individual patient so that they can offer medically appropriate and scientifically grounded treatments that reflect their best medical judgment. Clinicians are not ethically obligated to deliver care that in their medical judgment will not benefit the patient, and because clinicians have the ultimate decision-making authority regarding how care is delivered, patients should not be given treatments simply because they demand them. Although clinicians have autonomy regarding the care they choose to deliver, this charge must be balanced with the ethical and legal right of patients to refuse any medical treatment or intervention, even if it will prolong or preserve their life.

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