Viewpoint: What is the Best and Most Ethical Model for the Relationship Between Mainstream and Alternative Medicine: Opposition, Integration, or Pluralism?
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Abstract

Despite radical improvements in medicine over the past 60 years, patients maintain multiple health care pathways that include high utilization of unconventional treatments. The authors examine three possible relationships between mainstream and alternative medicine: opposition, integration, and pluralism. Opposition, the traditional ethical position that the medical profession must eradicate unconventional medicine for the good of the patient, has withered away. Integration of mainstream and alternative medicine is increasingly advocated in tandem with hospital-based programs that amalgamate the use of conventional and alternative therapies. While advocates of integrative medicine often speak of “evidence-based” complementary and alternative medicine (CAM), integration fosters double standards for validating conventional and unconventional treatments. Integration also ignores unbridgeable epistemological beliefs and practices between mainstream and alternative medicine. Pluralism, which has been relatively ignored, calls for cooperation between the different medical systems rather than their integration. By recognizing the value of freedom of choice in medical options, pluralism is compatible with the principle of patient autonomy. Nonetheless, the pluralistic model does not amount to a relativistic stance according in which there would be no objective standards for comparing the therapeutic merit of conventional and CAM treatments. As an ethical model, pluralism realizes that physicians must be prepared to disagree with patient choices to pursue alternative therapies, and urge patients not to forgo medically indicated treatment. Pluralism encourages cooperation, research, and open communication and respect between practitioners despite the possible existence of honest disagreement, and preserves the integrity of each of the treatment systems involved.


H istorically, mainstream medicine has vehemently opposed alternative medicine, and vice versa. At least since the establishment of the American Medical Association’s (AMA’s) first code of ethics in 1847, mainstream medicine has striven to contain and even obliterate what were once called medical “sectarians” or “sects.” Weapons in this struggle included the “consultation clause,” which stipulated that it was unethical for physicians to fraternize with or make referrals to “medical deviants.” AMA quackery committees, often with active cooperation of government agencies, were formed to expose bogus practices and the dangers of “the modern medicine-man.” Recently, opposition to what is now called complementary and alternative medicine (CAM) has eroded and its polar opposite, “integrative” medicine, is increasingly espoused. Academic health centers, community hospitals, health insurance companies, and the pharmaceutical industry seem to be scrambling to offer some fusion of what were once two distinct health care worlds. But is this move toward fusion the most appropriate approach?

We argue that a model of medical pluralism is superior to the opposition and integration models. By “pluralism” we mean that mainstream medicine and alternative medicine should relate to each other as separate but cooperative medical systems. A political analogy illustrates the three models of relationships between mainstream and alternative medicine. Opposition is a state of war; integration constitutes the union of previously sovereign and hostile states; and pluralism is a coalition of allies, characterized by honest agreement and disagreement. We advocate the pluralistic model with the following premises in mind: (1) diverse medical systems, based on fundamentally different medical theories and methods of validating treatments, inhabit the medical landscape; (2) despite many irreconcilable epistemological and practical differences, mainstream and alternative medicine share the goals of promoting health, relieving suffering and avoiding harm; and (3) both mainstream and alternative medicine should respect the autonomy of competent patients to make therapeutic choices in consultation with mainstream physicians or alternative providers.

Two Kinds of Medicine

Mainstream medicine

Mainstream medicine is fundamentally distinct from alternative medicine by virtue of its commitment to diagnose and treat patients in the light of current scientific knowledge. Science seeks to discover the objective truth about the natural world via framing hypotheses and subjecting them to rigorous experimental tests under controlled conditions. Within the scientific ethos, knowledge claims are understood to be fallible and provisional, open to question, modifications, or refutation based on subsequent experimental results. The ethos of controlled experimentation and fallibility makes science progressive.

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Within mainstream medicine, the discovery and validation of knowledge proceeds by means of the frameworks and techniques of molecular biology, laboratory experimentation, pathophysiology, and clinical trials methodology. While mainstream medicine undoubtedly draws upon the insights gathered from careful clinical observation, medical knowledge is considered most reliable when it is produced under controlled experimental conditions, allows for mathematical representation, and uses explicitly formulated methodological procedures. Like any science, medical science is suspicious of "anecdotal" or simple empirical experience. What is observed in everyday circumstances cannot be trusted as much as what is observed (and preferably measured and replicated) under controlled conditions. Bias and extraneous factors (such as spontaneous remission, natural history, or placebo effects) constantly threaten sincere knowledge claims about treatment efficacy in mainstream medicine.

Complementary and alternative medicine
CAM is a heterogeneous assortment of disparate medical beliefs and healing practices. Nonetheless, some threads of commonality are perceptible. Proponents of CAM systems usually assert that they operate within a theoretical and rational understanding of the world validated by the reliability of ordinary human experience. For many alternative medical systems, the process of validation and new discovery involves tension between the teachings of a revered founder (e.g., D.D. Palmer for chiropractic, Samuel Hahnemann for homeopathy) or canonical text (e.g., the Yellow Emperor’s Classic of Internal Medicine for East Asian medicine, the Charaka Samhitā for India’s Ayurveda) and a slow accretion of experience and interpretation, which necessarily selectively emphasizes or neglects aspects of the original sources. This tension between the golden past and the subsequent accumulated experience creates a system that is preserved or rearranged as needed, often under the guidance of authoritative interpreters. Traditional medicines are never static; for example, the Chinese pharmacopoeia incorporated Arab herbs during the Tang dynasty and American herbs during the 18th century, and contemporary practitioners of East Asian medicine in the West frequently adopt Western psychological methods as well as European herbs in their work. Change is slow, uneven, erratic, interpretative, often unacknowledged, and can seem arbitrary, at least to an outsider.

Fear of bias does not haunt CAM. Fundamental to these CAM systems is the belief that simple observation and experience corroborates, elaborates and extends the revered theories and healing practices. “Unimpeachable testimonials” of cures are acceptable evidence; case reports narrated in the singular are acceptable units of authentication. Alternative medicine makes no rigid separation between objective and subjective evidence. Immediate and personal experiences are positively valued, while objective detachment and analytic methods are not. CAM does not rely on evaluations of treatments by experimental controls, blind assessment, placebo comparisons, and statistical inferences, even though such methods are considered essential for adherents of mainstream medicine who want to evaluate CAM therapies.

Often, vitalistic forces undetectable by natural science that operate according to what is described as “natural law” are postulated to be the basis of observed changes in illness and health (for example, Ayurveda’s prana or chiropractic’s innate intelligence). Some CAM theories and practices are overtly supernatural. Magical or numinous healing powers are ascribed to objects, people or places. Examples include crystals, amulets, psychic cliroyants, or healing locations. Some CAM practices ascribe unlimited therapeutic power to the mind. Other CAM practices are related to popular health reform movements (such as vegetarianism and healthy lifestyles) that, on the surface, seem to be converging with recent biomedical developments in nutrition and lifestyle. Nonetheless, these movements preserve a distinctly romantic interpretation of “natural” modes of healing that is foreign to mainstream medicine.

Three Models
The opposition model
Until recently, in the tug-of-war between mainstream and alternative medicine, each side glorified itself and demonized the opposition. Caricature substituted for honest debate. In 1910, D.D. Palmer, the founder of chiropractic, grandiosely declared that his medicine was “destined to be the greatest . . . of any age” because it could treat all disease, and called the establishment “germo-antitoxis-vaxi-radi-electro-microbio-slush death producers.” In 1925, Morris Fishbein, the editor of The Journal of the American Medical Association, retorted that medicine must be based on “all those agencies which scientific experiments have taught him have the power to modify the actions of human tissues,” while chiropractic resembled the “healing of the savage tribes” that arrived “through the cellar . . . be-smirched with dust and grime.”

Oppositional pronouncements from both camps were difficult, if not impossible, to separate from obvious financial self-interest. Each side claimed selfless interest in patient welfare and saw hucksterism in the behavior of the other. Patients’ confusion, mistrust, despondency and anger were unavoidable in a climate of recriminations and hostility. Patients were easily caught in the crossfire, and their choices were easily disrespected. Understandably, patients often hid their consultations with alternative practitioners from mainstream physicians, and vice versa.

Recently, the opposition model has collapsed for sociological, legal, and ethical reasons. Chiropractors are licensed in all states (and in most states are considered primary health care providers). Acupuncturists and naturopaths are catching up. Despite the achievements of biomedicine in the last 50 years, many patients remain ambivalent or suspicious towards science. Surveys report that patients will continue to use their dietary supplements “even if they were shown to be ineffective in scientifically conducted . . . studies.” In 1994, the Dietary Supplements Health Education Act allowed the marketing of dietary supplements without proof of safety or efficacy as long as no claim was made concerning a specific disease. Nonfraternizing clauses have been declared illegal by the courts. And perhaps more important, shifts in bioethics have eroded the opposition model. In the last 40 years, paternalistic beneficence as the cardinal principle governing medical care has been overtaken by the primacy of patient autonomy and informed consent. Physicians are obligated to converse with patients about treatment options and respect the decisions of competent patients, including the refusal of offered treatments, even if the physicians totally disagree.
The integration model
The opposition model is rapidly being replaced by the integration model. Major institutions of biomedicine seem to be in a rush to create “patient-friendly” health care that offers a smattering of, at least, some alternative therapies. Proponents of the integration model advocate a “holistic” approach that addresses the physical, emotional, and spiritual manifestations of illness and offers multiple mainstream and alternative interventions aimed at promoting wellness, in addition to treating disease. Despite the attractive rhetoric, the integration model does not amount to a coherent medical framework. The philosophical, epistemological, and practical differences between mainstream medicine and CAM systems defy coherent integration. There is no common medical language for diagnosing conditions and prescribing treatment that integrates mainstream medicine and the different forms of CAM as equal partners. Within integrative practice, the evidence base for providing a therapy is unclear: it ranges from prescriptions from canonical texts, to clinical anecdotes, to observational studies, and to randomized trials. Accordingly, integrative practitioners will be unable to give patients a consistent and clear rationale for therapeutic options. Moreover, the effect of combining therapies is mostly unknown. The integration model promises that patients are offered the best of both medical worlds; but it seems more likely that patients are being denied the “integrity” of either world.

The project of integrating conventional medicine and CAM poses questions that are difficult, if not impossible, to answer. What disease categories are to be used: biomedical ones or those defined by the vocabulary of Ayurveda (e.g., pita, vita, kapha)? What should be the basis of evidence: randomized controlled trials and an understanding of pathophysiology, the pathways of acupuncture meridians, or the extension-beyond-recognition of scientific ideas concerning vitamins? Whose worldview is expressed in “integrated” medicine? Whose worldview is excluded? Does integrated medicine include Navaho chanting in a New York City hospital or crystals and pyramids at an academic health center? Who decides? On what basis are decisions made between competing worldviews and standards of evidence? Can integrated therapy become something beyond a cacophony of different perspectives? Is creating an integrated medicine something like forming a single world religion, where all the nuances and differences of long traditions and genuine spiritual differences are ignored?

The integration model is accompanied by lip-service to “evidence-based” CAM. However, rigorous evidence from randomized trials is rarely required to make use of a CAM therapy within an integrative medical practice. The standard of care in integrative medicine is likely to amount to an incoherent and untenable double standard, with rigorous scientific validation typically required for conventional treatments but only weak or equivocal evidence for CAM therapies. Such a posture is at odds with the scientific ethos of biomedicine. Some might advocate considering CAM therapies, given their historical use, as proto- or premature evidence-based therapies until the time when sufficient scientific evidence is gathered. But an appropriate scientific skepticism would require a less-than-optimistic anticipation of genuine therapeutic outcomes. On the other hand, if equally rigorous scientific evidence is required for both mainstream and CAM treatments, it seems likely that CAM will become marginalized within integrative medicine. The emerging data from numerous recent randomized controlled trials of CAM therapies indicate that few prove superior to placebo controls in well-designed studies—the “gold standard” for validating treatments in mainstream medicine. Moreover, CAM cannot be reconstructed on a scientific foundation and remain true to its epistemological privileging of either sensory or supernatural experience over scientific models of evidence. The integration model risks undermining not only the ethos of CAM, but also that of biomedicine.

Like the opposition model, the integration movement appears motivated to a large extent by economic considerations. Hospital medicine has been squeezed by reimbursement constraints from government and managed care. The seeming growth of interest in CAM is both a threat and an opportunity. Integration can be seen as an effort to maintain a loyal pool of patients, expand market share in competitive environments, and receive out-of-pocket payments that are not constrained by insurers. CAM practitioners benefit from a larger patient pool, as well as status enhancement via affiliation with the medical establishment. Economics can easily obscure incompatibility on the level of the philosophy, practice, or ethics of medicine.

The pluralism model
Two hundred years of survival in the face of vigorous opposition by mainstream medicine indicate that CAM is here to stay. The pluralistic model fosters tolerance and/or cooperation between mainstream medicine and CAM. It recognizes unbridgeable epistemological differences in the methods of developing medical knowledge and validating treatments, but acknowledges that both mainstream medicine and CAM can offer clinically valuable treatment options for patients in the light of informed choices based on their preferences and values. As an ethical basis for relationships between biomedicine and CAM, pluralism avoids the pitfalls of both the opposition and integration models.

The pluralistic model does not amount to a relativistic stance, where judgments about effectiveness and ethical norms are internal to particular medical systems, resulting in the inference that CAM treatments are just as good as conventional treatments. Pluralism is consistent with biomedical standards of objective efficacy assessment and universal ethical principles of respecting patient autonomy and selecting treatments according to patient-centered benefit-to-risk assessments. Furthermore, the pluralistic model does not require any compromise in ethical standards. For biomedicine, evaluation of benefit and risk depends on scientific evidence. To take an extreme example, it is rational to prefer surgical intervention or chemotherapy over homeopathy for treatment of life-threatening cancer if the former is likely to offer long-term survival and the latter to have no effect on disease progression. Although a competent adult is free to refuse conventional therapy and choose homeopathic treatment in this circumstance, a physician is obligated to vigorously recommend the conventional therapy and argue against the CAM alternative. Biomedical practitioners (and CAM providers) should counsel patients to avoid irreversible harms that are likely to result from forgoing validated, medically indicated treatment. When sacrificing health is not at stake and there is little threat of harm, then a wider latitude for open-mindedness towards patients’ choices is appropriate.
From the biomedical side, pluralism implies the need for openness and continued research. The research infrastructure of biomedicine must provide more definitive answers on the possible efficacy, adverse events, and social behavior implications of CAM. Positive and negative effects of combining conventional and CAM treatments need to be studied. Pluralism encourages cooperation and a common ground between biomedical investigators and CAM practitioners who want to participate in research. Pluralism might also encourage more debate between CAM traditions, which have often buried their conflicts in order to maintain a united front.

The fundamental differences between mainstream medicine and CAM do not preclude the benefits of reflective exchange and productive cooperation. For example, CAM has selectively borrowed mainstream data and techniques. Certainly, many patients of herbalists have benefited from the new revelations on the adverse effects of some botanicals, the potential for drug-herb interactions, and the discovery of contamination/adulteration from herbal products from Asia. And vitamins long ago crossed over from the mainstream world. Biomedicine has also borrowed from the CAM world (e.g., nitroglycerin from homeopaths, breastfeeding/home birthing from popular health reform, and an openness to the importance of diet and exercise in health). Learning the strengths of each other’s approaches might also benefit these dual streams in medicine and even improve patient care. In addition, a pluralist model offers the benefit of competition and self-reflection, where each system’s strengths can flourish and their weaknesses can be more easily perceived.

Pluralism between systems can improve communication between health care providers and patients. Within a pluralistic framework, physicians should accept the responsibility to engage in informed discussion with patients about CAM options. Such respectful relations can make patients feel that their choices to seek alternatives (or mainstream medicine) are genuinely respected and can promote open communication between patient and physician. Pluralism would demand that physicians and alternative providers become well educated in “other” medical systems and be able to provide respectful and critical feedback, guidance and coordination between systems. Pluralism might also encourage dual-trained physicians—alternative providers who would be thoroughly and uncompromisingly educated in both biomedicine and different CAM modalities. Such individuals could act as specialist clinical guides and cultural—educational bridges between the two worlds.

Active cooperation with CAM providers is also possible. When a physician sees no harm in a CAM practice, especially in a refractory patient or a patient who has received insufficient relief from conventional medicine, referral to a CAM practitioner may be legitimate. Also, creating health care facilities where different medical systems coexist may have the added value of facilitating genuine cooperation and less fragmented patient care.

It is possible that for some conditions, CAM may have placebo effects—that is, clinically significant benefit greater than would occur with no treatment. A meta-analysis of randomized trials provided evidence that there is only a small and possibly insignificant placebo effect (compared to no treatment) for subjective and continuous outcomes. However, a more recent meta-analysis looking at placebo analgesia experiments that compared placebo treatment administered with positive suggestion, as if in real clinical situations, with no treatment demonstrated large and significant placebo effects. Some have suggested that CAM provides an enhanced placebo effect, but research on this question is still limited. Nonetheless, when conventional medicine has nothing beneficial to offer particular patients it seems reasonable for physicians to consider referring them to CAM providers who genuinely believe in their therapy, provided that such treatment poses little threat of harm. At the least, patients may receive the therapeutic benefits of attention, care, and empathic witnessing.

**Summing Up**

A pluralist model fosters integrity in mainstream and alternative medicine because it both accepts irreconcilable differences and acknowledges the shared goal of optimal patient care. Most important, it can expand legitimate medical options, improve communication between patients and providers, and enhance informed choices by patients.

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**References**

2 Quackery progress to be reported in Chicago. JAMA. 1962;180:53.
12 Getzendenner S. Permanent injunction against the AMA. JAMA. 1988;259:81–2.
18 Baer HA. Biomedicine and Alternative Healing Systems in America. Issues of Class, Race,
Teaching and Learning Moments

Teaching Death

“God! You chose me to watch over the life and death of your creatures. I now turn to my calling . . .” The Maimonides Prayer

Another day as an ICU intern—endure hours of rounds, complete dozens of daily tasks, and watch another patient die. His systems were failing in sequence as they were probably designed to do. We had done everything the family wished. Today, it wasn’t sufficient.

While writing notes, I overheard that he was “bradying down.” Although swamped with work on other patients, I wanted to witness this because the attending predicted it just this morning. On the way to the bedside I overheard the new medical student saying to her patient’s family, “This is how we monitor the kidneys.” I motioned her over, “You should see this.”

She looked puzzled, as what could be more interesting than convoluted tubules and their effect on creatinine. “Mr. Holmes is not doing well,” I said.

“You mean, dying?” her voice shaking a bit. “He is on maximal pressors yet the pressure is dropping,” I said. “He maintained the rate, so the cardiac output was adequate for perfusion, but now it is decompensated shock.” She was jogging along next to me and nodding intently. I remembered doing the same thing only a year ago and feeling completely clueless. Before I could elaborate and help her understand the situation, we reached the bedside, watching the patient fall apart in real time.

I looked at him filled with tubes. I then looked up at the monitor with numbers falling and his EKG irregular and slow. The beeps were painfully infrequent in the backdrop of several wailing alarms. The nurse pressed a button activating a dreary silence, which was only broken by the ventilator breaths and my own heart beating. My initial anxiety rapidly dissolved into knowing anticipation. By now, I knew there was a rhythm to this process; a pattern, and it was calming. I looked at the nurse, the attending, and the residents; they were a team running a familiar play. I was unnecessary. Then, I saw the medical student, and at once knew my purpose. She was pale and anxiously scanning the room. I asked how she was doing. “I am okay. But what now?” she asked.

The heart rate was 56. Blood Pressure 60/30. Carefully choosing my words and speaking quietly and calmly, I began. A brief history and recent complications. Rate 48, Pressure 55/25. Multiple organ failure with worsening shock and bradycardia. Impending pulseless electrical activity and why the algorithm will not be followed. Rate 32, Pressure 49/25. I recounted the advanced directives and their incredible importance. I explained why we are not doing more than we should.

Asystole. I paused. We stood quietly as the monitor was disconnected and the ventilator was turned off. The body became peacefully still as the eyes stared vacantly ahead.

“Are you okay?” I asked, knowing that she wasn’t. “Yeah, thanks,” she said weakly. “Should we close the eyes?” she finally asked and I nodded in agreement, wondering why I didn’t think of it. Slowly she shut the patient’s eyes, and the eyes stayed closed as they do in the movies but not always in real death.

We later talked about it and she thanked me for walking her through the death of a patient. That day was unlike any other since I began in this profession. I did what I wish was done for me when I was “growing up” as a doctor. See one, do one, teach one.

This essay is dedicated to my parents, Dr. David and Marina Veysman, for the most important lessons.

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Reference