1

Introducing CAM . . . and the Many Questions It Raises

In 1971, *New York Times* reporter James Reston was stricken with acute appendicitis while in China to cover the Secretary of State's visit. He had surgery in a Beijing hospital. His article, describing how his postoperative pain was relieved by acupuncture, stimulated interest in the United States. Today Americans make more than 5 million visits per year to acupuncturists (Eisenberg et al. 1998).

In 1975, Herbert Benson, a cardiologist at Harvard Medical School, published a pathbreaking book, *The Relaxation Response*, which showed how cardiac disease could be slowed, even reversed, through meditation. New knowledge about nutrition also began to help heart patients. Dietary guidelines, revised in the 1980s, warned against eating red meat and other animal fats and encouraged heart patients to increase their intake of fiber.

In the early 1990s, cancer clinics across the United States introduced patients to stress reduction, visualization, music therapy, and aromatherapy, to name a few novel treatments, to help them through the traumas of chemotherapy and survive the trials of their illnesses. Palliative care clinics also expanded and are now a gratifying source of solace for dying patients and their families.

In the late 1990s, reports that sham surgery – that is, placebo – worked as well as real surgery for patients with Parkinson's disease and for people with arthritis of the knee stunned the medical community and put some surgeons in a precarious position. This after earlier reports that, in clinical trials, placebo worked just as well as a number

of standard medical treatments (glomectomy for bronchial asthma, levamisole for herpes infection, gastric freezing for duodenal ulcer). That "placebo works" is no longer news.

On July 9, 2002, millions of women were shocked to learn that the hormone replacement therapy they had been taking to relieve symptoms of menopause may cause cancer. Within two weeks, *The Wall Street Journal* published an article detailing the rush by manufacturers of herbal products to fill the hormone void. One problem, however, is that herbs are not regulated by the Food and Drug Administration (FDA) and the safety and efficacy of the more commonly used herbal remedies for menopausal symptoms have not yet been fully tested.

The problem of readily available yet untested herbal preparations was vividly brought to public attention on February 17, 2003, when Steve Bechler, a 29-year-old baseball player, died of multiple organ failure as a result of heat stroke during spring training in Florida. He had been using ephedra for weight control. The extent to which ephedra was a contributing factor in his death was widely debated in light of his other risk factors for heat stroke. Nevertheless, several months before this high-profile case, the Secretary for Health and Human Services had asked the FDA "to evaluate the best scientific evidence available and recommend the strongest possible mandatory warning label possible for ephedra products" (*FDA News*, October 8, 2002, 1).

Interest in complementary and alternative medicine (CAM) is sweeping the United States. CAM has become one of the fastest-growing fields in health care. Millions of people are spending billions of dollars, out of pocket, on therapies that until just recently physicians considered to be quackery. Although segments of the medical community remain skeptical, even dismissive, of the disparate set of practices and modalities that constitute CAM, some physicians are responding positively to their patients' interests, to recent developments in research, and to the new courses on alternative, complementary, integrative, and holistic medicine being offered by medical schools. Government has also turned its attention to the growth of CAM and, in fact, is contributing to it by spending millions of dollars to fund research on the safety and efficacy of certain therapies.

Along with the broadening interest a growing number of questions are being raised. What is CAM, why are so many people using it, do they know what they are doing, do the therapies work, are they safe, are

they just placebo, how are they going to affect health care? These are among the many questions I address in this book. I investigate several dimensions of the growth of CAM, explore a number of explanations for the surge in its popularity, and look both inside the phenomenon to understand the processes and dynamics behind its recent gains, as well as outside it to understand its relationship to broader institutions and changes in American health care and American society. This chapter offers a brief overview of the main issues that are shaping how we understand CAM and how we are assessing its impact on American health care.

WHAT IS CAM?

Complementary and alternative medicine is an umbrella term given to a collection of disparate healing practices.[1] Some of the therapies are well known and fairly widely used in the United States (herbs, acupuncture); others are more obscure (qigong, reflexology). Naming specific therapies is one way to answer the question, what is CAM – but just barely. Table 1.1 does a little more. It lists those therapies identified by participants at the first conference (known as the chantilly conference) on alternative medicine sponsored by the National Institutes of Health (NIH) in 1992 (known as the Chantilly Conference) and, in keeping with decisions made at the conference, it organizes these therapies into a system of types based on fields of practice.[2]

[1] As we will see, some of these practices are so different that one risks committing a fundamental error by lumping them all under the rubric of CAM. I best acknowledge up front that I am at fault in this book. I ask the reader to bear in mind that my use of the acronym "CAM" is for convenience only. We will also see that neither the acronym CAM nor the three words that comprise it are altogether correct as descriptions of the current state of affairs. The word "integrative" has replaced the word "alternative" in some arenas. Although certain practitioners think of their work as medicine, others say their practices are therapies. For the sake of readability, I vary my use of the acronym CAM with the word "alternative" to describe practices and practitioners.

[2] In this book I discuss only a few CAM therapies – those that are the subject of the research elaborated in Chapter 6. Because of the research, these therapies are developing a new and special relationship with medicine. Certain herbs, certain mind–body therapies, certain movement therapies, certain manual therapies, and certain holistic systems are coming to be accepted by some physicians. They are undergoing a process of mainstreaming. Whether other therapies, those that are not the subject of research, will also be mainstreamed is too hard to predict at this point in time.

TABLE 1.1. *CAM Therapies*

Mind–Body Interventions
Psychotherapy (psychodynamic, behavior, cognitive, systems, supportive, body-oriented therapies)
Support groups
Meditation (transcendental meditation, relaxation response)
Imagery
Hypnosis
Biofeedback
Yoga
Dance therapy
Music therapy
Art therapy
Prayer and mental healing

Bioelectromagnetics

Alternative Systems of Medical Practice
Professionalized health systems
  Traditional oriental medicine (acupuncture, moxibustion, acupressure, remedial massage, cupping, qigong, herbal medicine, nutrition, dietetics)
  Ayurvedic medicine (individualized dietary, eating, sleeping, and exercise programs, including yoga, breathing exercises, and meditation)
Homeopathic medicine
Anthroposophically extended medicine (practices that seek "to match the key dynamic forces in plants, animals, and minerals with disease processes in humans to stimulate healing" [xvii])
Naturopathic medicine
Environmental medicine (the science of assessing the impact of environmental factors on health)
Community-based health care
  Native American Indian (Lakota, Dineh, or Navajo practices, such as sweating and purging, herbal remedies, shamanic healing, singing)
  Latin American rural (Curanderismo includes a humoral model for classifying activity, food, and drugs, and a series of folk illnesses, such as "evil eye," "fright," "blockage." Santeria is a Cuban-American variant.)
Urban community-based systems (Alcoholics Anonymous)
Popular health care (from informal sources)

Manual Healing Methods
Physical healing methods
  Osteopathic medicine
  Chiropractic
  Massage therapy (Swedish, deep tissue, sports, neuromuscular, manual lymph drainage)

Pressure point therapies (reflexology; traditional Chinese massage; acupressure systems, such as shiatsu, tsubo, jin shin jyutsu)
Postural reeducation therapies (Alexander technique, Feldenkrais method, Trager psychosocial integration)
Structural integration (Rolfing)
Bioenergetic systems
Biofield therapeutics
Healing science
Healing touch
Huna (traditional Hawaiian)
Mari-el
Natural healing
Qigong
Reiki
Specific Human Energy Nexus (SHEN®) therapy
Therapeutic touch
Combined physical and biofield methods
Applied kinesiology
Network chiropractic spinal analysis
Polarity therapy
Qigong longevity exercises
Craniosacral therapy
Physical therapy

Pharmacological and Biological Treatments
Antineoplastons
Cartilage products
Ethylene diamine tetraacetic acid (EDTA) chelation therapy
Ozone
Immunoaugmentative therapy
714-X
Hoxsey method (herbs such as pokeweed, burdock root, buckthorn)
Essiac (herbs such as sheep sorrel, burdock, slippery elm inner bark, rhubarb)
Coley's toxins
MTH-68
Neural therapy
Apitherapy
Iscadore/misletoe
Revici's guided chemotherapy

Herbal Medicine (ingested, inhaled, salves, poultices)

Diet and Nutrition in the Prevention and Treatment of Chronic Disease

Source: Adapted from Workshop on Alternative Medicine. 1995. *Alternative Medicine: Expanding Medical Horizons. A Report to the National Institute of Health on Alternative Systems and Practices in the United States.* Washington, DC: U.S. Government Printing office.

From the table we can see that yoga, for instance, is a type of mind–body intervention as well as a component of Ayurvedic medicine. Although the typologies represent a major first step toward getting an analytical handle on the therapies, they also present some puzzles. To suggest a couple: why are reiki and other biofield energetics not considered mind–body interventions, and what is prayer doing on the list, let alone why is it combined with mental healing?

The conference participants confronted some of the many issues raised by the very topic of CAM in a major publication that resulted from the conference (Workshop on Alternative Medicine 1995). They described most of the therapies named in the list and suggested how some therapies are similar and therefore collected into a typology and how some differ even though they are listed under one typology (such as the different kinds of massage). When one examines specific therapies to learn more about them, one quickly appreciates that this theme of similarities and differences is an important and useful organizing tool. But one is also struck by its limitations for grasping the complexity of the therapies.

Consider the list of mind–body interventions. Although these various therapies aim to achieve a similar outcome, relaxation, their techniques for doing so are very different – so different, in fact, that one begins to wonder how they can all be classified under the same category. Some of the mind–body therapies require a significant measure of intervention by a practitioner (imagery, hypnosis); others require only minimal intervention or none at all (support groups, meditation, prayer). Some of the practitioners require considerable training (psychotherapy), others less so (art therapy). In some of the therapies the recipient is active (yoga, dance therapy); in others less so (meditation, hypnosis). The therapies also differ in origin (time and place), theoretical framework,[3] "technologies" (the body, music), and even use of modern technology.[4] If this degree of difference exists among

[3] Transcendental meditation and yoga are based on the principles of Ayurvedic medicine, which require that they be part of a holistic regimen that includes diet. Hypnosis is based on the assumption of a deep state of consciousness similar to a trance, in which individuals are guided by a practitioner to concentrate their thoughts on a desired outcome.

[4] Biofeedback uses sophisticated instruments that monitor voluntary and involuntary bodily activities and functions. Some computerized music therapy goes far beyond ancient drumming and chanting.

therapies within one category, what might the differences be across categories?

Consider next herbs and acupuncture, two very different therapies in terms of technique and theory – that is, what practitioners and recipients do, what their mechanisms of action are in the body, and so on. Yet, herbs and acupuncture are closely related within the holistic health system of traditional oriental medicine. Notice, though, that Table 1.1 also lists qigong and tai chi (two forms of body movement coordinated with breathing) and reflexology (a type of acupressure applied to the feet and, sometimes, hands) as components of traditional oriental medicine. Yet, these various therapies are not always combined in practice. Anyone who has traveled to Shanghai and Beijing, for instance, knows that reflexology is used more in Shanghai than in Beijing. Also, not all acupuncturists in either city recommend either tai chi or qigong and those who do may prefer one over the other. At the same time, not everyone who practices tai chi or qigong also sees an acupuncturist, herbalist, or massage therapist. In Hong Kong, practitioners of traditional Chinese medicine prescribe herbs but generally do not perform acupuncture. In New York, acupuncture and herbal medicine can be so distinct that practitioners and users of either one may be remarkably unfamiliar with the other. So, where does this information leave us? How are we supposed to understand herbs and acupuncture, whether alone or linked with each other or with other therapies? If we must understand each as unique, on what basis are they linked within traditional oriental medicine? Why is acupuncture not listed under manual healing method when it is theoretically closer to acupressure and reflexology than to herbs?[5] The list of questions based on a few facts easily expands.[6]

[5] According to the principles of traditional oriental medicine, acupuncture, acupressure, and reflexology act on a theoretical system of meridians, which are pathways of energy that run throughout the body. A particular form of acupuncture, electroacupuncture, is also a type of bioelectromagnetic therapy.

[6] There are several other analytical problems with the category "alternative systems of medical practice" because it is difficult to grasp what is common among these very different practices. Some of them clearly involve "folk principles" that can be distinguished from other types of CAM by their "very close [alliance] to specific ethnic [groups; they] are largely derived from the groups' culture of origin or ancestry" (O'Connor 1995, 1). Folk medicine is different from, say, herbal medicine because, even though many ethnic groups use herbs, they do so in accordance with a larger belief system. So, we would want to distinguish among ethnic groups because, regardless

WHAT IS THE RELATIONSHIP BETWEEN CAM AND MEDICINE?

As a means of grasping the significance of some of these questions and perhaps formulating some preliminary answers, we can turn to the field of medicine. Medicine also consists of a number of different practices and products: diagnosis, treatments such as chemotherapy and surgery, and prognoses on how long one might still live. The practice of medicine also has a number of specialized branches (cardiology, dermatology, pediatrics), each of which uses specialized products,[7] focuses on a different part of the body, and approaches body dynamics differently. We do not ask how these specialized branches, practices, products, and approaches can be lumped together because we know that medicine is unified by a common epistemology – science. However, we should be more attuned to epistemological differences within medicine; indeed, some of us have been made all too aware of the fact that science alone does not always unify medicine. One oncologist, for instance, tells a breast cancer patient that she needs a lumpectomy, radiation, and chemotherapy, whereas another says that a mastectomy and radiation are necessary. Both oncologists were trained in the same school, read the same journals, and have the same information about the patient. So, why the difference? Some possible answers: perhaps they are interpreting the data differently, perhaps they have different clinical experiences with the treatments, or perhaps they are in different

of whether they use similar herbs for similar disorders, their belief systems and values differ. However, we do not yet know the significance of these various similarities and differences. The committee named only the 4 most common ethnic-based practices in the United States, and made some unusual ties and separations. For instance, it decided to unite traditional oriental medicine and Ayurveda with environmental medicine and anthroposophically extended medicine, which combines naturopathy and homeopathy, under the subheading "professionalized health care systems." It also distinguished these from Native American Indian and Latin American modalities, designating the latter, together with Alcoholics Anonymous, as community-based practices. To be sure, these terms all reflect certain real-world characteristics of the health care systems. We can see, however, that groupings and labels may also have unintentional consequences, in this case an unfortunate devaluation of, for example, curanderismo as not professional and more linked with Alcoholics Anonymous (even though the latter is urban and not community based) than with Ayurveda. The endeavor demonstrates how difficult it is to make language scientifically precise without connoting some social relationships.

[7] Although pharmaceuticals are pervasive, they are highly specialized; for instance, drugs that control or reduce cholesterol in heart patients may differ from those prescribed for obese children.

hospitals that have developed different cultures of practice. These answers speak less to science than to other factors that inform the practice of medicine and that create disunity within the medical community.[8]

Applying these ideas to CAM, we might suggest that the different kinds of therapies resemble the disciplinary fields of conventional medicine. Each therapy has its own practices and products, practitioners make recommendations based on the particular approach to healing found in their field of practice, and practitioners within the same field may differ in their interpretation of the information they have about any one patient. The analogy is not entirely satisfying, however, because it begs the question of a unifying epistemology that does for CAM what science does for medicine. If the various therapies, even those classified within one "field of practice," are based on different techniques and different theories, how can they (let alone all of CAM) cohere epistemologically?

Alternatively, we have seen that some of the therapies do cohere, both within and across categories. Is there enough of a commonality among certain therapies to allow us to say that they are unified in a way that is similar to what we find among the disciplines in medicine? To investigate this possibility means that we would have to set aside the typology developed by the first Workshop on Alternative Medicine, decide on another framework for sorting the therapies, throw them back up into the air, and see where they land.

This is what is happening now. It is a process I call mainstreaming. Once again the NIH, specifically the National Center for Complementary and Alternative Medicine (NCCAM) at the NIH, has gathered researchers and practitioners from both the medical and CAM communities. This time, however, the NCCAM has decided on the framework – science. It is asking the researchers to investigate specific alternative therapies, those that are more widely used in the United States and for which there is some preliminary evidence of efficacy, and to discover whether these therapies can be understood scientifically. The

[8] My references to the "the medical community" and "the CAM community" require the same qualification as my use of the acronym CAM – these are for convenience only. As we will continue to see, there are deep divisions within both "communities," as well as between them, so the reader should bear in mind that the reference is always to "some" within the category.

NCCAM is generously supporting this research. The story of how and why mainstreaming is occurring and what we can expect from it will unfold in the course of this book. We will see that, ultimately, what mainstreaming is all about is the effort (1) to identify some of the similarities between CAM and conventional medicine, and (2) to strengthen the links between these two approaches to health care. Mainstreaming can also be thought of as a process of understanding CAM – a relatively new field of health care – in terms that are more familiar to us, pertaining to the field of medicine.

The role of science is becoming a critical factor in how we understand CAM, and it is demonstrating some interesting and important linkages between CAM and conventional medicine. For instance, science is offering a new approach to herbal medicine. Research underway on certain botanicals closely resembles research on pharmaceuticals. Chapter 5 explains the methodology of randomized controlled trials (RCTs) and the debates about the appropriateness of this method for investigating alternative therapies. These debates aside, we are learning how certain herbs work in and of themselves – that is, their organic mechanisms of action – as well as how effective they are in treating certain ailments. We are also learning more about how acupuncture works and for what conditions acupuncture might be more appropriate than, say, surgery. Research on acupuncture is aiming to address other issues as well, some of which are difficult to answer scientifically. For instance, acupuncture and surgery are both used to treat lower back pain. If they are shown to be equally effective, might it not be better to use acupuncture because it is less invasive than surgery? Although RCTs can help evaluate these forms of treatment, determining which is better, for what and for whom, and introducing concerns about invasiveness require a different kind of discourse, one that draws on interpretations and preferences. Physicians are beginning to learn, if they do not already know, that these tasks are as much a part of medicine as scientific investigations of various treatments. As CAM enters the field of health care, issues of interpretation and preference are coming more to the forefront of decision making about treatment options, whether these issues are raised by patients or result from research findings that can answer only certain questions.

In other words, scientific investigations are not only influencing how we understand CAM. They are also affecting the role of alternative