The growing presence of complementary and alternative medicine

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The use of complementary and alternative medicine (CAM) in the United States is growing, according to a study in the November 1998 *Journal of the American Medical Association (JAMA)* special issue on alternative medicine.[1] In a survey that compared the prevalence of alternative medicine use among American adults in 1991 and again in 1997, more than 4 of every 10 respondents reported using at least 1 of the 16 alternative therapies measured.[2]

CAM has been used for thousands of years; many such practices have great potential for reducing symptoms and complications of disease. But most people who use CAM regimens do so without supervision, and some therapies may be associated with severe side effects.[3-8] Clinicians therefore need to ask patients about their use of CAM regimens and to provide information about benefits and side effects of specific agents.

The extent of public use of alternative practices first came to light with the results of a national survey conducted by Eisenberg and colleagues on unconventional medical practice in the United States and reported in 1993. Data culled from the responses of 1,539 adults to a telephone survey of 1,539 in 1991 were published in the *New England Journal of Medicine.*[2] The findings include

- In 1990, about one third of Americans were regularly using nontraditional health practices
- More office visits were made to unconventional medical practitioners in 1990 than to primary care physicians
- Approximately $14 billion a year was spent on alternative practices, the bulk of which was out of pocket and un-reimbursable.

The lead article in the November 1998 issue of *JAMA* compared the results of a second randomized phone survey of 2,055 adults conducted by Dr. Eisenberg and his team in 1997. Utilization of CAM therapies increased from 34% to 42%, with estimated total visits to alternative practitioners increasing from 427 million to 629 million (a 4 7% increase), exceeding all visits to all US primary care physicians. These people spent approximately $27 billion out of pocket on alternative therapies in 1997, the authors estimated, approximately the same as estimated out-of-pocket spending for all US physician services.[1]

Classification of alternative therapies

Known by a variety of terms--complementary, holistic, alternative, unorthodox, integrative-CAM refers to most treatment practices that are not considered conventional medicine; that is, those not widely practiced by the mainstream medical community. Neither is there consensus on the definition or the classification of therapies.

Although most medicine practiced in the United States is allopathic or osteopathic, worldwide approximately 70% to 90% of health care is delivered by what would be considered alternative tradition or practice.[9] incorporating hundreds of different philosophies and procedures, alternative therapies are usually ideology-based.

In 1992, the National Institutes of Health (NIH) created the Office of Alternative Medicine (OAM) in response to congressional mandate to facilitate evaluation of alternative medical. Treatment modalities to determine their effectiveness. The mandate also provided for a public information clearinghouse and a research training program. According to its mission statement, "the OAM identifies and evaluates unconventional health care practices that maintain or induce healing processes that, in turn, promote wellness and alleviate suffering, illness, and disease. The office supports and conducts research and research training on these practices and disseminates information to practitioners and the public on

complementary and alternative medicine's clinical usefulness, scientific validity, and theoretical underpinnings."

To standardize the definition and characteristics of CAM**,** the OAM developed the following definition: *Complementary* and *alternative medicine* is "those treatments and healthcare practices not taught widely in medical school, not generally used in hospitals, and not usually reimbursed by medical insurance companies."[9] Barrie R. Cassileth, PhD, noted expert in the field and founding member of the Advisory Council to the OAM, deftly divided alternative and complementary into separate parts.[10] *Alternative* applies to therapies recommended by practitioners for use "instead of mainstream care" and are, therefore, truly "alternative" to conventional medicine (e.g., acupuncture, aromatherapy, homeopathy, and chiropractic). *Complementary* is used to describe therapies that, as the term denotes, serve a "supplementary" role.

In the first year of its existence, OAM devoted itself to identifying the alternative medicine community and barriers to the evaluation of complementary and alternative medical practices. In September 1992, 10 working groups were charged with the task of formulating a series of recommendations related to future research opportunities and activities at the NIH**.** This international group of experts included research methodologists, public health professionals, biomedical scientists, and practitioners of complementary and alternative medicine.

In 1995, the work of this group resulted in the creation of seven broad categories of CAM practices, including alternative systems of medical practice; bio electromagnetic applications; diet, nutrition, and lifestyle changes; herbal medicine; manual healing; mind-body control; and pharmacologic and biologic treatments. CAM was defined as comprising those practices that are not part of the dominant medical system of the country.

Wayne Jonas, MD, formerly director of the OAM, describes a slightly different classification that simplifies the wide and diverse spectrum of CAM. First, *CAM-related* areas are practices that are fairly well accepted by, close to, or used in conventional medicine. Behavioral-relaxation techniques are an example; nutritional therapies and chiropractic might also fall into this category. Second, *emerging* areas, which usually are conceptually acceptable by conventional medicines, are' too new or recently arrived to have been integrated very much into traditional therapies; an example is the therapeutic use of certain herbal preparations, such as the herbal extract of *Hypericum,* or Saint John's-wort, to treat depression. Last**,** there are *frontier* areas that include practices not currently acceptable conceptually in the Western framework; homeopathy is an example.[11]

The OAM has now been changed. Passage of the 1999 Omnibus Appropriations Bill, signed by President Bill Clinton in October 1998, established the National Center for Complementary and Alternative Medicine (NCCAM). Establishment of NCCAM and its appropriated budget of $50 million for fiscal year 1999 provide greater autonomy in the area of initiating research. projects at a time when the public is increasingly interested in CAM therapies.

Use and acceptance of alternative therapies

According to a recent study at the Stanford Center for Research in Disease Prevention at Stanford University School of Medicine, Palo Alto, Calif, 40% of respondents reported using some alternative medicine during the previous year.[12] Most prevalent were chiropractic (15.7%), lifestyle and diet (8%), exercise and movement (7.2%), and relaxation (6.9%). The most frequently cited health problems for which alternative therapies were sought were chronic pain (37%), chronic fatigue syndrome and related conditions (31 %), sprains and muscle strain (26%), addiction and arthritis (25%), and headache (24%).

Another study, conducted by Landmark Healthcare, a Sacramento-based managed care company, revealed that in 1997, 42% of adults surveyed had used some type of alternative care. The Landmark Report I on Public Perceptions of Alternative Care, based on a random survey of 1,500 households, found that 45% of adults surveyed were willing to have access to alternative health care; 74% used it in addition

to conventional care; and 61 % said their physician knew that they used alternative medicine. The most prevalent alternative treatments among respondents were herbal therapy and chiropractic.[13]

The recent *JAMA* theme issue on alternative medicine provided additional information on the demographics of CAM utilization. Researchers exhaustively explored exactly which demographic groups utilize alternative therapy. Although they found that the "use of alternative therapies in 1997 was not confined to any narrow segment of society," they did find that women used alternative therapies more often than men and that African-Americans tended to use these kinds of therapies less than other racial groups. The highest rate of CAM use was among people 35 to 49 years of age; those who used CAM were more likely to be college graduates, to have an income above $50,000, and to live in the western United States.[1]

The authors reported that ''the largest increases were in the use of herbal medicine, massage, megavitamins, self-help groups, folk remedies, energy healing, and homeopathy." Nearly one half of visits· to alternative practitioners were to chiropractors and massage therapists. Conditions commonly treated by alternative practitioners included back problems, neck problems, arthritis, and headaches.[1]

Provider knowledge and attitudes about alternative therapies have also been measured. At the American Association of Health plans annual meeting in 1997, Yankelovich Partners surveyed 300 health care professionals who work in a health maintenance organization (HMO) about their attitude toward spirituality and healing.[12] Results were compared to findings of a similar survey conducted of 269 family physicians in 1996. Researchers found that 94% of HMO professionals believed that personal prayer, meditation, and other spiritual practices can accelerate medical recovery of ill patients and that 7 4% believed these practices may have an impact on containing the cost of care. In addition, 83% believed that some practices, such as relaxation and meditation, should he a standard part of formal medical training (compared with 80% of family physicians polled who believed that).

Safety of therapy

As the use of CAM increases, particularly by people who have a chronic medical problem such as arthritis depression, diabetes, pulmonary disease, or HIV infection, more reports are likely to surface regarding its benefits and risks.[14,15] Within the seven categories of CAM, applications that appear to have the most potential for harm are herbal remedies and dietary supplements.

Herbs have been used for medicinal purposes with effective results since the early days of human activity. In fact, many modern drugs, including digitalis, atropine, and narcotic derivatives, were developed from plants. Some herbal medicines are, however, harmful under certain conditions; for example, long term use of chaparral and comfrey is associated with hepatotoxicity.[17,18] Clinicians need to ascertain whether patients are using herbal remedies that are free of contamination and whether the ingestion of specific agents is not putting the patient at risk.[19,20]

(On the positive side, some complementary therapies-for example, relaxation techniques may permit reduction of the dosage of medications, used in traditional therapies, such as insulin, anti-hypertensive**,** and analgesics.[21])

Nontraditional medical practices are increasingly undergoing examination in randomized, controlled; clinical trials. The results of four such studies were published in the 1998 *JAMA* special issue on CAM, with two showing significant beneficial effects.

For example, a randomized, controlled trial from China of moxibustion (stimulation of a specific acupuncture point on the fifth toe by the heat of burning herbal preparations), significantly increased fetal activity in prim gravida women who had an initial breech presentation in the 33rd week of gestation. In addition, this treatment significantly increased the number of fetuses with a cephalic presentation at 35 weeks and at delivery.[22]

A randomized, placebo-controlled study from Australia of a mixture of Chinese herbal preparations in patients who had irritable bowel syndrome showed that subjects reported significant

improvement in symptoms compared to the placebo group.[23] (Of additional interest is the fact that the placebo group had a 30% favorable response rate.)

Assessing an alternative provider

- How much experience does the provider have with similar patients?
- Of what, precisely, will therapy consist?
- What frequency of treatments or visits will be required?
- How many weeks will pass before patient and provider can decide if therapy is working?
- What are the cost and foreseeable risks of the recommended treatment?
- Is the provider willing to communicate with you, the conventional provider?

Response of organized medicine

To evaluate CAM therapies, the Council for Scientific Medicine created a peer-reviewed journal, *The Scientific Review of Alternative Medicare,* in 1997, indicating that the publication is "dedicated entirely to the scientific, rational evaluation of Unconventional health claims."[24] The journal publishes reviews of alternative medical treatments, such as chelation therapy, based on the evidence from previously published medical studies.

An editorial in the 1998 *JAMA* special issue on CAM acknowledges the risk of incorporating alternative medicine into regular practice and in exposing alternative treatments to the ills of conventional medicine.[25] The author, Wayne Jonas, states that the main risk of conventionalizing alternative medicine is the loss of its messages:

- "Empowerment, participation in the healing process, time, and personal attention"
- Using a gentle approach to focus on the patient's inherent capacity for self-healing
- Containing medical costs by utilizing "low cost interventions such as lifestyle changes, diet, supplement therapy and behavioral medicine."[25]

A second editorial in that issue of *JAMA* asserts: "Priority for research funding for alternative medicine should be given to investigations of relevant clinical problems for which well-designed studies have shown encouraging results for alternative therapies, especially for conditions that are common and those for which conventional. Medicine has not been effective."[26]

CAM has received additional attention in the past few years with adoption of policy statements by the Council on Scientific Affairs of the American Medical Association (AMA) and by the American Academy of Family Physicians· (AAFP). The AMA recommended that

- Well-designed, controlled research should evaluate the efficacy of alternative therapies
- Physicians should routinely inquire about the use of CAM by their patients
- Patients should be counseled on the possible hazards of postponing or stopping conventional medical treatments ·
- Medical schools should present their scientific view of unconventional therapy including their efficacy and safety

In December 1998, the AMA's House of Delegates approved a resolution to work with the FDA to educate clinicians and the public about potential adverse events associated with dietary supplements and herbal remedies. Another resolution was passed to work with Congress to modify the Dietary Supplement Health and Education Act of 1994 to require that current and future dietary supplements and herbal remedies undergo FDA approval for evidence of safety, efficacy, and quality and be held to standards for packaging and labeling, including adverse events and drug interactions.[27]

The AAFP, in its 1997 policy statement on complementary practice, recognized the availability of CAM and recommended evidence-based review of the efficacy and effectiveness of CAM. It also urged

physicians to educate themselves in nontraditional methods of medicine to better educate, treat, and counsel patients and consumers.

CAM and medical education

In a 1998 survey of 107 PA programs, 52% of respondents reported offering course work on "alternative medicine" in their curriculum.[28] In the United States, medical schools do not consistently include course work on CAM. In a 1996-1997 survey of 125 accredited US medical schools that was conducted by the AMA, researchers found that 46 included CAM in a required course and 4 7 offered an elective in this topic.[29] For the graduate physician and practitioner, more opportunities are becoming available for continuing education on CAM topics.

Making inquiries about CAM

Ask your patient

- Do you seek alternative or complementary care?
- How did you arrive at this particular therapy?
- Did you see an alternative therapist for this condition?
- How frequently do you use alternative therapies?
- What effect have alternative therapies had on you?
- For which (other) medical conditions do you use these alternative therapies?
- If you are using these alternative therapies for your medical condition, are they under the supervision of a physician, a PA, or a provider of alternative care?
- What is your attitude toward traditional therapies?

Ask yourself

- Is the alternative therapy harmful?
- Is it a roadblock to necessary traditional care?
- Can the alternative therapy and the traditional therapy be used concomitantly?
- Does the patient have preconceived notions (e.g., fears) about traditional therapy?
- Is traditional therapy failing the patient?

How to evaluate CAM therapies

To increase education and awareness of CAM, the NCCAM encourages people who are contemplating a specific therapy to seek out additional, information and to talk to their health care provider first. NCCAM recommends that patients assess the safety and effectiveness of any CAM therapy, examine the CAM practitioner's role when alternative therapy is prescribed, and consider how the service is delivered.

Patients should also try to determine if the delivery of service adheres to standards of medical safety and care. This can be assessed by contacting state or local regulatory agencies or health care consumer organizations.

NCCAM recommends that patients learn about the background, qualifications, and competence of any provider who practices CAM-whether physician or other practitioner. Patients should contact local, state, or national agencies that regulate or represent CAM practices, where these exist. NCCAM also recommends assessing whether a practitioner is licensed to deliver the services he or she provides. Eisenberg developed a set of questions for patients and a set of question for clinicians to ask alternative practitioners that may help assess their competence[19] (see "Assessing an alternative provider," page 94).

In 1997, the OAM published the recommendations of an expert panel that examined the role of clinical practice guidelines in CAM**.** The panel concluded that CAM, in its present heterogeneous form,

was not a suitable subject of evidence-based clinical practice guidelines because well-designed, randomized, controlled clinical trials with relevant outcomes data are lacking.[30]

Two years later, however, researchers investigating a possible growth of interest in CAM by the professional scientific community found that interest in and awareness of CAM among orthodox health care professionals had increased in the past 30 years. They determined this by tallying the number of MEDLINE-listed and clinical trial-type CAM articles between January 11 1966 and December 31, 1996. The increase in the number and proportion of reports of clinical trials of CAM signaled an increasing level of original research into CAM and suggests a trend toward an evidence based approach to this discipline.[31]

The NCCAM has created a Research Database and Evaluation program. Its goal is to develop an electronic bibliographic database of the CAM literature; categorize current information on CAM practices; maintain a list of journals that publish research on CAM; and expand the terminology used to classify that research. The program is developing a process of systematic reviews and Meta analyses of published studies of CAM and funds several specialty research centers that study CAM for specific disease conditions (HIV and AIDS, women's health, addiction, pain, cancer).

Obtaining necessary information

Clinicians should ask patients about their use of alternative therapies when taking a history (see "Making inquiries about CAM**,"** page 96). Primarily, this will help identify which alternative practitioners; if any, the patient has been seeing, the kinds of alternative medicines being taken, and the patient's perception of their usefulness.

Clinicians should also ask themselves about the efficacy and safety of the alternative therapies that their patients report taking. Because patients may elect to continue such alternative therapies, perhaps as an adjunct to traditional ones that the clinician prescribes or monitors, it is important to be informed about any concurrent alternative therapies and their effects (see "Resources for clinicians from the NIH and its CAM center").

Resources for clinicians from the NIH and its CAM center

• More information about the history, organization, and activities of the National Center for Complementary and Alternative Medicine {NCCAM) at the National Institutes of Health (NIH) is available at its Web site {altmed.od.nih.gov). Although the NCCAM is not a referral service for CAM therapies it does provide information to enhance public understanding about CAM research that is supported by the NIH.

• Requests for fact sheets, information packets, and the institute's quarterly newsletter, *Complementary and Alternative Medicine at the NIH,* should be made to NCCAM Clearinghouse, PO Box 8218, Silver Spring, MD 20907 -8218; by fax, (30.1) 495-4957.

• Toll-free telephone service-at (888) 644-6226-is maintained by information specialists from 8:30 AM to 5 PM Eastern time. The service accommodates English and Spanish speakers.

• Several publications are available from the NCCAM Clearinghouse. The NCCAM general information ' packet covers frequently asked questions and the classification of complementary and alternative health care practices. Pamphlets included in the packet are "Considering Complementary and Alternative Therapies?" "Alternative Medicine Research Using MEDLINE," "OAM Research Information," OAM Cancer Information," and "Research Centers."

• The NCCAM supports 10 · research centers that focus on different clinical areas, including one at Columbia University in New York City that is dedicated to women's health. The research focus of other CAM specialty centers supported by the NCCAM includes HIV and AIDS, general medical conditions, stroke and neurologic conditions, addiction, aging, asthma, allergy, immunology, and cancer; two centers focus on pain. Most have their own Web site providing information to the public-information that has been evaluated using a scientific approach.

• The National Library of Medicine's list of medical subheadings, or MeSH, includes only 23 under "alternative medicine." Because MEDLINE searches are limited to those headings, NCCAM is working with the library to expand and refine this list to improve the search capability for CAM topics. Even with such limitations, more than 30,000 citations can be retrieved by searching the following headings under "alternative medicine": acupuncture, anthroposophy, biofeedback, chiropractic, color therapy, diet fads, eclecticism, electric stimulation, homeopathy, kinesiology (applied), massage, medicine (traditional), mental healing, moxibustion, music therapy, naturopathy, organ therapy, radiesthesia, reflexotherapy, rejuvenation, relaxation techniques, therapeutic touch, and tissue therapy.

Conclusion

The trend toward using CAM modalities will surely continue and probably accelerate as more information becomes available about their efficacy and safety. To provide the best care possible, PAs need to be knowledgeable about what treatments, including CAM, their patients are, or anticipate, using.

Even though CAM remedies will undergo closer scrutiny in clinical trials, many consumers will continue to use--and benefit from--alternative therapies that have not undergone rigorous testing. Information is therefore key--information about our patients, their other providers, and ourselves.

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