Use of and Attitudes Toward Complementary and Alternative Medicine Among Family Practice Patients in Small Rural Illinois Communities

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ABSTRACT: ***Context:*** *Complementary and alternative medicine (CAM) use continues to increase in the United States. Data on rural patients' use and extent of integration of CAM with conventional medicine are lacking, although this is a population often associated with use of "folk remedies" and self-care strategies.* ***Purpose:*** *To examine rural primary care patients' attitudes toward and use of CAM.* ***Methods:*** *A total of 176 surveys (70% response rate) were returned by patients at 5 geographically dispersed, rural Illinois family practice clinics to examine rural patients' use of, attitudes toward, and experiences with alternative medicine and providers.-* ***Findings:*** *Nearly two thirds of patients reported use of alternative medicine. Therapies most often used were vitamins/megavitamins, chiropractic, relaxation, and prayer/faith healing. Rural patients with more medical problems and a higher level of education were more likely to use alternative techniques. Three fifths of the patients felt that their doctor should discuss alternative medicine and therapies with them.* ***Conclusions:*** *Physician understanding and communication regarding CAM may be especially important in rural areas, where access to care is more limited and where there is greater reliance on the primary care physician as a "gatekeeper" for patient health.*

The present study examines rural primary care patients' attitudes toward and use of alternative medicine (also referred to as unconventional or complementary medicine). The types of alternative medicine modalities or techniques used by rural patients are explored in the context of their use of conventional medical care.

Eisenberg et al[1] describe alternative medicine as medical interventions neither taught widely in US medical schools nor generally available in US hospitals. Three main criteria have been used to define alternative medical practice or treatments[2]: lack of sufficient documentation in the USA for safety and effectiveness against specific diseases/conditions; generally not taught in medical schools; and generally not reimbursed by health insurance providers.

The term *complementary* medicine has gained favor over the term *alternative medicine*. Studies have shown that patients are not abandoning conventional methods but rather are using alternative methods in conjunction with traditional medicine. Drivdahl and Miser[3] reported that approximately two thirds of patients used alternative methods *in conjunction with* routine medical care; only 16% used alternative methods instead of conventional medicine.

In 1993, based on a US national probability sample, Eisenberg et al[1] found that one in 3 respondents (34%) reported using at least 1 unconventional therapy in the past year, and one third of these individuals visited alternative providers. Additionally, the vast majority (83%) who were using unconventional therapy also sought treatment for the same condition from a medical doctor—but over 70% of these patients never mentioned this use to physicians. In a follow-up study, Eisenberg et al[4] found that 42% of Americans were using some form of alternative therapy, an increase of 24% compared with the earlier study. Of these complementary medicine "users," 46% reported visits to an alternative medical provider.

Most patients do not discuss complementary and alternative medicine (CAM) use with their physicians. Reasons for lack of disclosure of alternative therapy include the following: physicians not asking; patient reluctance to discuss; lack of physician knowledge of alternative medicine; and patients' perceived negative reaction by the physician.[1,5] This may be particularly important in rural areas, where health care delivery faces challenges different from and sometimes greater than those in urban or suburban areas.[6] Rural residents may suffer more frequently from chronic disease and injury, have lower general health status, and perceive themselves to be less healthy than urban populations.[7] The rural population is often associated with use of "folk remedies" and self-care strategies, but data on rural patients' use and extent of integration of CAM

with conventional medicine are lacking.[8-10] It is therefore imperative that physicians be aware of such use and integrate this into the delivery of conventional care.

Methods

Site Selection. Towns with populations of less than 20 000, and those that are not adjacent to metropolitan areas, were defined as rural. A listing of teaching rural family physician offices was obtained from the Rural Medical Education Program of the University of Illinois College of Medicine at Rockford. Within time and resource constraints, 5 physician offices (of 25) were selected for the study. All 5 physician offices elected to participate, representing communities ranging in size from 1000 to 15 000 (mean = 6242). The communities were geographically dispersed in northern, central, and southern Illinois locations.

Survey Instrument. A survey was developed, based on literature review and questions used from an earlier study of alternative medicine use conducted at the medical school (Bame, unpublished data, 1997). Questions addressed patients' frequency and type of use of alternative therapies, actual visits to alternative providers, discussion of therapies and providers with the physician, attitudes toward alternative therapies, general health status, and demographics. Questions were mostly close-ended, with alternatives of "checked/not checked" and a range from "strongly agree" to "strongly disagree." For some questions, there was an open-ended format and space for comment.

Survey Administration. Each clinic site was visited, the study was explained in detail to physicians and office staff, and surveys were provided for distribution. English-speaking adults with the ability to read were included in the study.

Surveys were distributed to a convenience sample by the office staff at the time of patient visits. The goal was to collect 50 surveys at each site over a 3–4-week period. After patient consent, office staff recorded the name of the patient and survey number. To maintain confidentiality, patients were given a self-addressed, stamped envelope to mail the survey to the primary investigator (MH). Patients were informed that telephone follow-up was possible if the surveys were not received within a period of 2 weeks.

Data Analysis. Initial analysis consisted of comparisons between selected variables among sites to examine comparability between samples. This was followed by analysis of trends and patterns in use of and experiences with CAM in relation to demographic and health characteristics. Chi-square, *t* tests, and *F* tests were used, as appropriate.

Results

A total of 176 of 250 patients (70%) completed and returned surveys; completion rate ranged from 60% to 86% across the 5 sites. There were no statistically significant differences between sites in relation to patient gender, race, age, marital status, and education. Patients from the larger towns had higher incomes, but this value was not statistically significant ($P = .077$). There were no significant differences among patients at each site related to self-reported health status, number of visits to the doctor's office, and total number of medical conditions. Given these findings, the remainder of the analysis focuses on characteristics, attitudes, and experiences of the respondents as a whole.

Just over 80% of respondents were women and 99% were white, reflecting the ethnic background of the patients visiting the rural clinics. The average age was 47.9 years (SD = 16.7), and mean number of years of education was 13.3 (SD = 1.9). Over 14% of respondents reported an annual family income of less than $10 000, with almost 30% reporting an income between $10 000 and $20 000; 33% reported an income between $20 000 and $40 000, and 23% reported incomes above $40 000. Over three quarters of respondents were married. Almost 75% self-rated health status as "good" or "excellent"; the average number of reported medical problems/conditions was 2.7 (SD = 2.2). Medical problems/conditions most often reported were back problems (36%); headache (29%); high blood pressure (24%); obesity (23%); fatigue (19%); depression (17%); and anxiety (16%). Mean number of visits to the doctor's office in 1 year was 5.

Patients were asked "Do you use any type of alternative medicine therapy?" If they answered "yes," the question was followed by a listing of different therapies, along with a category of "other" (Table 1). Sixty-three percent (n = 110) of the respondents reported use of alternative therapies. The proportion of reported use between sites was not significantly different (ranging from 55% to 77% utilization: $\chi = 3.5$; $P = .478$). The mean number of alternative therapies used by patients was 4.3 (SD = 2.9), with a range of 1 to 13. Over 50% of patients indicated use of 3 or fewer therapies, but only 10% reported use of just 1 alternative therapy. Most frequently used therapies were vitamins/megavitamins (85%), chiropractor (66%), relaxation (60%), prayer/faith healing (58%), and massage (51%). Least often used by these rural patients were hypnotherapy (10%), reflexology (11%), and vegetarianism (13%).

In comparing rural CAM users to nonusers, there

Table 1. Frequency and Types of Use of Complementary and Alternative Medicine (CAM) Therapies by Rural Family Practice Patients (n = 110)

No. of Therapies Used by Patients Reporting Use*	%
1	10.0
2	20.9
3	20.9
4	15.5
5	9.1
6 or more	23.5

Therapy Type	% of All Patients Reporting Use
Vitamins/megavitamins	85.2
Chiropractic/spinal manipulation	66.3
Relaxation techniques	59.6
Prayer/faith healing	57.7
Massage/touch therapy	51.1
Home remedies/folk medicine	46.8
Herbal medicine	41.4
Homeopathic medicine	21.3
Acupuncture/acupressure	17.4
Biofeedback	14.4
Vegetarianism	13.3
Reflexology	11.2
Hypnotherapy	10.1

* Mean, 4.3; SD = 2.9.

Table 2. Comparison of Demographic and Health Characteristics of Users Versus Nonusers of Complementary and Alternative Medicine (CAM) Therapies by Rural Family Practice Patients (N = 176)

Variable	CAM Users	Nonusers	*P*
Gender (% female)	78	82	.542
Average age	47.8	46.7	.677
Education (% >high school education)	59	43	.053
Annual family income (% <$20,000)	58	53	.515
Health status (% good/excellent)	73	79	.359
Average # of medical problems*	3.0	2.0	.003
Mean # of visits to doctor's office	5.6	4.0	.081

* Self-reported.

was no difference in use based on age, gender, or income (Table 2). However, respondents with greater than a high school education were more likely to be CAM users than were those with lower levels of education (59% versus 43%; $P = .053$). There were no differences between CAM users and nonusers related to self-reported health status and frequency of doctor visits, but users reported more medical/health-related problems (3.0 versus 2.0; $P = .003$).

Additionally, compared with those who did not report use, patients using alternative therapies were much more likely to have back problems (47% versus 16%; $P<.001$) and more likely to experience headache (34% versus 19%; $P = .038$). CAM users were also somewhat more likely to have experienced fatigue (23% versus 11%; $P = .068$) and chronic pain (18% versus 8%; $P = .074$).

As might be expected, nonusers of alternative therapies were more likely to agree that they did not "believe" in CAM use ($P<.001$). They were also more likely than users to agree that they did not know enough about CAM ($P = .009$) and that they did not know where or to whom to go for alternative therapies ($P = .015$). On the other hand, patients reporting use of CAM were more likely than nonusers to agree that they would be willing to "pay out of pocket" for alternative therapy ($P = .008$); believe that insurance companies or HMOs should cover all or some alternative therapies ($P = .017$); and be aware of alternative medicine prior to completion of the study survey ($P = .023$). Compared with nonusers, CAM users were more likely to agree that they took preventive measures, such as dieting and exercise, for staying healthy, but this number was not statistically significant ($P = .101$).

Of the patients reporting use of CAM therapies, self-reported frequency was 49% "everyday," 34% "rarely," 13% once a month, and 4% once a week. "Everyday" users were more likely than "rare" users to report involvement with hypnotherapy ($P = .057$), reflexology ($P = .041$), vegetarianism ($P = .009$), home remedies ($P = .016$), vitamins/megavitamins ($P = .025$), homeopathy ($P = .011$), and herbal medicine ($P<.001$). For these CAM users, 48 (45%) reported visiting an alternative provider for treatment. Patients who visited alternative providers had lower self-reported health status ($P = .003$) and more medical problems ($P = .001$) compared to patients not visiting alternative providers.

For these rural patients using CAM therapies, nearly 60% believed that their doctor should discuss alternative medicine and therapies with them (Table 3). Yet less than half of the patients (49%) indicated that their primary care doctor was aware of the patient's use of alternative providers or therapies, even though 25%

Table 3. Patterns of Communication Regarding Complementary and Alternative Medicine (CAM) Therapy Use Between Rural Patients and Their Family Physicians, As Reported by Patients

Item	% Yes or Agree
Overall Communication	
Patient believes doctor should discuss alternative medicine/therapies	59.2*
Doctor aware of patient's use of alternative provider or therapy	48.8†
Patient sees doctor and alternative provider for same condition	25.0†
Patient would like more information about alternative medicine/therapies	59.5†
Patient-Initiated Communication	
Patient discusses alternative medicine/therapy with doctor	45.7‡
Patient routinely communicates use of alternative medicine/therapies to doctor	34.0‡
Patient wishes better able to discuss alternative medicine/therapies with doctor	37.0†
Physician-Initiated Communication	
Doctor discusses alterative medicine/therapy options for problems or illness	27.6‡
Doctor routinely asks about patient's use of alternative medicine/therapies	19.1‡
Doctor has referred patient for alternative medicine/therapy	18.3‡

* Yes/agree = strongly agree or agree versus neutral, disagree, or strongly disagree.
† Yes/agree = yes versus no.
‡ Yes/agree = yes many times, yes quite a few times, or yes but only a few time versus no or never.

reported they were actually seeing the doctor and an alternative provider for the same condition.

Overall, patients indicated that they initiated discussion regarding alternative medicine and therapies more often than did the physician. About half (46%) said they discussed alternative medicine with doctors, and over one third (34%) reported having routine communication with the physician. For those patients who did not discuss alternative therapies with the doctor, 37% wished they were better able to discuss the topic with their physician. On the other hand, only 28% of patients reported that their doctors discussed alternative treatment options for problems or illness, and just 19% of doctors routinely discussed alternative therapies. According to the patients, less than 20% of the physicians had referred the patient to an alternative provider. Finally, nearly 60% of the rural patients would like to have more information from their doctors about CAM therapies.

It could be argued that therapies such as prayer or vitamins/megavitamins might not be considered "alternative" therapies if, for example, the patient prayed as well as going to the family doctor and/or if the patient was using "accepted" vitamins but not megavitamin therapy. Patients' responses, therefore, were also examined in terms of those therapies generally considered to be alternative care (chiropractic, hypnotherapy, acupuncture, biofeedback, homeopathy, massage, and relaxation).

Of the 11 patients reporting use of just 1 alternative therapy, 6 (55%) used one of the so-called "true" CAM therapies generally considered to be alternative (4 used chiropractic and 2 massage). Of patients reporting use of 2 therapies, 68% were using "true" CAM therapies, and of patients using 3 modalities, 78% were using CAM therapies. Of patients reporting use of 6 or more modalities, all were CAM therapies. Thus, as the number of reported alternative medicine therapies increased, the likelihood of using a "true" CAM therapy also increased.

Discussion

Consistent with past studies, which were primarily conducted in urban areas, rural patients in this study revealed that they regularly use CAM. Nearly two thirds of patients reported such use, a proportion higher than the national average of 42%, as reported by Eisenberg et al,[4] but below the 80% reported use by patients of family physicians by Bathke.[11] Of the rural patients reporting CAM use, 25% were seeking care for the same problem/condition from both an alternative provider and the physician—a value that is substantially below the 83% figure reported by Eisenberg and colleagues,[1] which may reflect differences in community-based versus patient-based samples. Further, past studies have indicated that between 30% and 50% of the patients using alternative therapies have discussed this use with their doctor.[1,12] The present study's results were very similar, with 46% of patients indicating they discussed use of alternative therapies with medical doctors.

These patterns of communication are interesting when considered in relation to the findings of Buening and Duclos,[13] who examined personal experience and knowledge of family physicians in relation to CAM therapies. In their study, 48% of physicians reported that they "almost always" or "always" asked patients about

use of alternative medicine therapies as part of routine history-taking. Yet just 19% of patients in the current study reported that doctors routinely discussed alternative medicine/therapies. It is possible that patients do not recall being asked about use of CAM therapies or that physicians are overestimating how frequently they themselves inquire about these therapies.

Additionally, 88% of the physicians in the Buening and Duclos[13] study indicated that they recommended some form of CAM therapy to patients. This percentage is substantially larger than the number of family physician patients in the present study who indicated that CAM was discussed at all or than the 18% of patients who reported having been referred by doctors to an alternative practitioner. Regardless, results of the present research reinforce the conclusion by Buening and Duclos that "Patients will continue to seek out and spend more on CAM (complementary and alternative medicine) therapy. Physician responsibility now includes eliciting patient use and responding appropriately through gained knowledge." (p 11).

A large range of alternative therapies were used by these rural patients. For CAM users, the average number of therapies used was more than 4, with nearly one quarter of patients indicating use of 6 or more therapies. Patients who actually visited an alternative provider, as opposed to those who practiced "self-care," tended to have more medical problems and lower reported health status. Consistent with past studies, these rural patients appear to use CAM therapies as a complement to, not a replacement for, conventional medicine.

Oldendick et al[14] conducted a population-based survey of alternative medicine use in South Carolina. They found that 52% of respondents reported use of alternative medicine, compared with 66% in the present study. The latter, higher figure is a reflection that the present study represents a somewhat biased sample of people already seeking some sort of health care for an existing problem/condition.

Findings from the Oldendick et al[14] study parallel the findings of the present study. The proportion of people using chiropractic/manipulation was nearly identical in the 2 studies (20.5% in Oldendick versus 21% in the present study), as was use of relaxation techniques (26% in Oldendick versus 23% in the present study). Both studies found that education plays a major role in patients' CAM use.

Perhaps as important as documenting the type of use of alternative therapies by rural patients is obtaining information on the communication between patients and doctors concerning CAM therapies. The majority of these rural patients using CAM therapies (59%) felt that their doctors should discuss alternative medicine and therapies with them. Forty-six percent of patients indicated they made a point of discussing their alternative therapy use with the doctor, and 37% wished they were better able to discuss alternatives with their doctors.

In terms of appropriate and effective delivery of health care, adequate histories, including nonjudgmental discussions of CAM therapies on the part of the physician, are vital. Eisenberg et al[15] argue that physicians must put an end to the "don't ask, don't tell" approach to alternative medicine. Open and nonjudgmental questioning of patients may help increase a physician's knowledge of patient use of alternative therapies and lead to improved patient care, as physicians, patients, and alternative providers can work together toward better health. Moreover, patients using alternative therapy, while also being monitored by their physician, will feel that they have been "listened to" in a safe environment.

As more people turn to alternative therapies, it is important for physicians to be open to hearing about patients' interest in alternative approaches. Physicians have the responsibility to fill the communication gap by asking patients about their use of alternative therapies.[16] This may be especially important in rural areas, where access to care is more limited and where there is greater reliance on the primary care provider as a "gatekeeper."

Three limitations of the present study should be noted. First, the setting in which the research was conducted is representative of a convenience sample of practices serving as preceptor sites for a rural medical education program. It is possible that these practices are different from other primary care practices in the state, although participating clinics varied in relation to size of community and income levels of patients. Teaching physicians may be more attuned to a learning/education role and perhaps more knowledgeable or accepting of patient use of CAM therapies. Second, the study sample was almost exclusively white and representative of the participating small rural communities, but rural ethnic and racial minority populations are not represented. Finally, this is not a population-based study; rather, it represents a convenience sample of patients visiting rural family practices.

There are very few studies that explore the use of CAM therapies by rural populations. Despite the above limitations, the results do shed light on a rather neglected segment of the US population. More research is called for in order to better understand how rural primary care doctors can most effectively meet these desires and expectations of their patients.

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