Use of Alternative Therapists Among People in Care for HIV in the United States

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Objectives. This study examined the influence of sociodemographic, clinical, and attitudinal variables on the use of alternative therapists by people in care for HIV.

Methods. Bivariate and multivariate analyses of baseline data from the nationally representative HIV Cost and Services Utilization Study were conducted.

Results. Overall, 15.4% had used an alternative therapist, and among users, 53.9% had fewer than 5 visits in the past 6 months. Use was higher for people who were gay/lesbian, had incomes above $40 000, lived in the Northeast and West, were depressed, and wanted more information about and more decisionmaking involvement in their care. Among users, number of visits was associated with age, education, sexual orientation, insurance status, and CD4 count.

Conclusions. Among people receiving medical care for HIV, use of complementary care provided by alternative therapists is associated with several sociodemographic, clinical, and attitudinal variables. Evaluation of the coordination of provider-based alternative and standard medical care is needed. (*Am J Public Health.* 2003;93:980–987)

Complementary and alternative medicine (CAM) is widely used in the United States by people with various chronic illnesses and for preventive purposes.[1,2] Numerous studies have investigated CAM use among people infected with HIV.[3–18] Despite this research effort, questions remain. The prevalence of CAM use in this population remains somewhat uncertain, evidence regarding the correlates of CAM use is limited and conflicting, and relatively little empirical evaluation has been done of how attitudinal factors influence CAM use among people infected with HIV.

Previous estimates of CAM use (self-care and alternative therapist use combined) among people infected with HIV have ranged from 29%[10] to 76%,[9] with some researchers suggesting that people infected with HIV use CAM at substantially higher rates than people with other serious illnesses.[3,11] Evidence from industrialized countries other than the United States (Italy, Great Britain, Canada, and Australia) has revealed similarly high levels of CAM use among people infected with HIV.[19–22] Although overall levels of CAM use appear to be moderate to high among people with HIV infection generally, the available evidence suggests that CAM use among people with HIV infection is disproportionately high among Whites, males, homosexuals, people educated beyond high school, and those who have higher incomes.[3–5,7,10,14,16] Beyond this basic demographic profile, existing studies have yielded limited evidence regarding other correlates of CAM use among people infected with HIV. Some studies have found that HIV-related clinical indicators, such as having received an AIDS diagnosis, having a lower CD4 count, experiencing opportunistic infections, and having been seropositive for more than 2 years, are associated with use of CAM, whereas others have not.[3,8–10,12,13,15,16] Few studies of people infected with HIV have examined substance use and mental health problems in relation to CAM use, although many studies have concluded that people infected with HIV use CAM to promote emotional well-being. Available evidence suggests no association between depressive symptoms and CAM use among people infected with HIV[16,21]; however, in 1 study, users of CAM providers (as opposed to users of self-prescribed herbal, mineral, and vitamin supplements) were particularly likely to say that they used CAM to relieve stress and depression.[9]

The available evidence on the prevalence and correlates of CAM use among people infected with HIV is somewhat mixed and uncertain, at least in part because most studies have used small convenience samples selected from clinics, and samples often lack representation and variation in key domains. Frequently, no distinction is drawn between alternative therapies administered as part of a self-care regimen and CAM provided by an alternative therapist. This distinction is important, because the correlates of CAM use as part of a self-care regimen may be different from the correlates of alternative therapist use, and evaluation of variation in the amount of CAM use may be complicated when self-care and alternative therapist use are conflated.

Little empirical evaluation of the influence of attitudinal factors is found in the existing literature on CAM use among people infected with HIV. Three potentially complementary theories that focus on attitudinal factors have been developed in studies of CAM use in the general population and in qualitative studies of CAM use by people infected with HIV.[23–31] These theories suggest that use of alternative medicine may be motivated by various factors that either push or pull the person toward CAM use, such as dissatisfaction with conventional medicine, the need for ideological congruence, and the need for personal control. People may be driven to using alternative medicine because of the failure of conventional medicine to help; because of distrust or lack of confidence in the efficacy of conventional medicine; or because of past negative medical experiences. Similarly, some people may be attracted to alternative medicine because of their belief in alternative health care and its efficacy, or because they hold a distinct set of health beliefs legitimating nontraditional medical practices. For these people, CAM may offer treatments and explanations for disease that are more compatible with the individual's worldview regarding health and illness. Additionally, for individuals disposed toward asserting control over their illness (i.e., those who seek to "become their own doctors"[25,26]), self-care may promote feelings of personal control, and nontraditional health care providers may allow individuals to play a more active role in the management of their illnesses.

In this study, we used data from the HIV Cost and Service Utilization Study (HCSUS), a nationally representative study of people receiving conventional medical care for HIV, to address some of the limitations and gaps in the existing literature on CAM use among people infected with HIV. Using this population-based sample, we focused on the use of alternative therapists (as opposed to CAM use more generally). We estimated the prevalence of alternative therapist use in the past 6 months and the number of visits among those having made at least 1 visit. We also examined sociodemographic, clinical, and attitudinal correlates of alternative therapist use among people receiving conventional medical care for HIV and the amount of use among those with at least 1 visit to an alternative therapist.

Drawing on available theories and empirical evidence, we hypothesized that use of alternative therapists would be higher among Whites, men, homosexuals, the better educated, and those with higher incomes. Although available evidence is mixed, we also examined the associations between use of alternative therapists and several indicators of HIV clinical status, substance use, and depression. Finally, focusing on attitudinal factors, we hypothesized that use of alternative therapists would be more likely among people who have greater uncertainty about the efficacy of conventional HIV treatments, have experienced discrimination because of their HIV status, are better informed about HIV, have high interest in the personal management of their care and treatment, and have less trust in conventional medical providers.

METHODS

Sample Design

Data for this study came from baseline interviews with participants in the HCSUS, a nationally representative study of HIV-infected adults receiving health care within the contiguous United States. HCSUS was funded under a cooperative agreement between RAND and the Agency for Healthcare Research and Quality. HCSUS drew a nationally representative probability sample from a reference population that included HIV-infected adults aged 18 years or older who—during a predefined population definition period, from January 5, 1996, to February 29, 1996, in all but 1 metropolitan area, in which the start was delayed until March—made at least 1 visit to a nonmilitary, nonprison medical provider (other than an emergency department) in the context of regular or ongoing care.

The HCSUS used a complex, multistage probability sampling design in which geographic areas were selected in the first stage, medical providers within the selected geographic areas were sampled in the second stage, and patients were selected from the sampled medical providers in the third stage. Full details of each sampling stage are available elsewhere.[32,33]

Data Collection

Of the 4042 eligible participants sampled, 76% were interviewed; 71% completed long-form interviews (2864 interviews) and 5% completed short-form or proxy interviews. For a further 16%, some basic nonresponse data from providers were obtained. The overall coverage rate (i.e., the ratio of the population directly represented to the population that would have been directly represented had response been complete at all levels) was 68% for the long-form interviews.

All interviews were administered with computer-assisted personal interviewing instruments[34] and were conducted in either English or Spanish. Interviews began in January 1996 and ended 15 months later. Overall, 91% of the long-form interviews were conducted in person; the remainder were done by telephone. Sampled patients remained anonymous until they were approached by providers or their agents and had given permission for the research team to contact them to schedule an interview.

Dependent Variables

This study did not examine all forms of CAM: analysis focused on use of an alternative therapist and (among those with any use) number of visits in the past 6 months. Respondents were asked if they had received "treatment from any alternative therapist, for example, a massage therapist, acupuncturist, herbalist, or any other alternative practitioner" in the past 6 months. This question was embedded in a module that began: "Now I have some questions about the various types of health care you've received during the last 6 months. I would like to know about all the medical care you have received, not just care related to HIV." A positive response to this question indicated the use of an alternative therapist. A follow-up question obtained data on the number of visits made to alternative therapists in the past 6 months. Because all people in the sample were receiving regular medical care and we only measured use of an alternative therapist (as opposed to use of CAM generally), this study focused exclusively on the use of complementary care provided by an alternative therapist.

Independent Variables

Respondents reported their gender, race/ethnicity (coded as White, African American, Hispanic, or "other"), and education (coded as high school or less, high school graduate or equivalent, some college, or college graduate or more education). To assess potential nonlinearities, age was categorized as 18 to 29 years, 30 to 39 years, 40 to 49 years, or 50 years or older. Respondents reported their sexual orientation and were categorized as gay/lesbian, heterosexual, bisexual, or other orientation (i.e., celibate, transsexual, and "other"). Self-reported family income in 1995 was categorized as \$0 to \$4999, \$5000 to \$9999, \$10 000 to \$24 999, \$25 000 to \$39 999, or \$40 000 or more, and respondents were categorized as being uninsured or having Medicaid, Medicare, or private health insurance. Region of residence was coded as Northeast, Midwest, South, or West.

Numerous clinically relevant variables were also measured. Disease stage was measured by whether the respondent had been diagnosed with AIDS and the respondent's lowest CD4 count (coded as ≥500, 200 to 499, 50 to 199, or 0 to 49). Depression was measured using the screening questions from the Composite International Diagnostic Interview, which yielded a dichotomous indicator of increased risk for depressive disorder.[35,36] Drug use was measured as any use "on one's own" in the past year of 1 or more of 8 classes of drugs, where use "on one's own" was explicitly defined as use "without a doctor's prescription, in larger amounts than prescribed, or for a longer period than prescribed." The 8 classes of drugs were sedatives, sleeping pills, or tranquilizers; amphetamines or other stimulants; analgesics or other prescription painkillers; marijuana or hashish; cocaine, crack, or freebase; inhalants (other than cocaine) that you sniff or breathe to get high or feel good; LSD or other hallucinogens; and heroin. If the respondent answered yes to use of any substance in the past year, he or she was assigned a value of 1 on the dichotomous indicator used in the analysis. Heavy alcohol use was defined as drinking on at least half the days in the 4 weeks before the interview and typically having 3 or more drinks on those days; if either of these conditions did not hold, the respondent was classified as not being a heavy drinker (even if he or she drank some alcohol).

Attitudes, knowledge, and beliefs about medical care and treatment that might have influenced alternative therapist use were measured with several indicators. Perceptions about antiretroviral therapy (ART) were measured with a dichotomous indicator that was constructed to reflect certainty vs some degree of skepticism about whether ART was "worth taking." The module stated, "Now we'd like to ask you how you feel about different approaches to treating HIV infection. Let's start with antiretroviral drugs, such as AZT, ddI, and ddC. Considering both the benefits and risks of taking antiretroviral therapies, would you say that for you they are: definitely worth taking, probably worth taking, probably not worth taking, or definitely not worth taking?" Certainty that ART is worth taking is conceptualized as an indicator of a more positive attitude toward standard medical care, an attitude that might result in lower use of alternative therapists. Respondents' orientations toward medical treatment were also assessed by asking them about their preferences regarding aggressive treatment. Respondents were asked, "If you had to make a choice at this time, would you prefer a course of treatment that focuses on extending life as much as possible, even if it means having more pain and discomfort, or would you prefer a plan of care that focuses on relieving pain and discomfort as much as possible, even if it means not living as long?" The response options were "definitely extend life as much as possible," "probably extend life as much as possible," "probably relieve pain as much as possible," and "definitely relieve pain as much as possible." A dichotomous indicator was constructed to measure an orientation toward more aggressive treatment (definitely/probably extend life=1 vs a preference to relieve pain=0).

Respondents' HIV-related knowledge and orientation toward treatment information were assessed with 2 indicators. Self-assessed knowledge about HIV/AIDS was measured with a single dichotomous indicator. Respondents were asked to rate how well-informed they thought themselves to be about HIV disease and treatment relative to most people who are HIV positive. Respondents indicating that they perceived themselves to be "much better informed than most"; and "somewhat better informed than most" were categorized as better informed (vs those who viewed themselves as being "about as well informed," "somewhat less well informed", or "much less well informed"). Respondents' desired level of information involvement reflected the extent to which they wanted to know about their HIV disease and its complications. Respondents were asked whether they strongly agreed, agreed, disagreed, or strongly disagreed with the following statements: "I want to take an active role in the medical management of my HIV infection and its complications" and "I want to know as much as I can about the medical aspects of my HIV condition and treatment." These items were combined into a 4-point scale in which higher scores indicate a stronger desire for information involvement. Cronbach's α for the scale was .61.

We also assessed respondents' attitudes toward and experiences with medical providers. Degree of trust in medical providers was assessed with 2 items that asked respondents, "How much do you trust your doctor or clinic to offer you high-quality medical care?" and "How much do you trust your doctor or clinic to put your health above all other concerns?" Response options ranged from "completely" (1) to "not at all" (5). Responses to these questions were reversed, combined, and placed on a scale ranging from 0 to 100, in which higher scores indicate greater trust (α=.85). Desired level of decision involvement reflected the extent to which respondents wanted to be involved in medical decisionmaking. Using the same response options noted earlier for information involvement, the interviewer read the respondents the following statements: "It is better to trust a doctor or nurse in charge of a medical procedure than to question what they are doing" and "I'd rather have doctors and nurses make decisions about what's best than for them to give me a lot of choices." These items were combined into a 4-point scale, in which higher scores indicate stronger disagreement (i.e., greater desire for involvement in decisions about medical care) (α=.76). Finally, respondents indicated whether they had experienced discrimination in the health care system. The question asked: "People with HIV often sense discrimination from health care providers in subtle ways. Has anyone in the health care system ever done any of the following to you: exhibited hostility or a lack of respect toward you; given you less attention than to other patients; or refused you service." If the respondent answered yes to any 1 of these 3 items, he or she was coded as having experienced discrimination.

Statistical Analysis

The analyses presented in this article are based on data obtained from long-form interviews only (n=2864). Because of missing data, the analytic sample included 2754 cases. In the Results section, after describing the population of people in care for HIV in early 1996, we present estimated rates of alternative therapist use and examine bivariate associations between our independent variables and any alternative therapist use in the past 6 months. Finally, we present a 2-part model that examines use of alternative therapists. In the first part, we used multivariate logistic regression to estimate the influence of each independent variable on the odds of using an alternative therapist; in the second part, we used multivariate ordinary least squares regression to analyze the logarithm of the number of visits among those with any visit. All continuous independent variables

TABLE 1—Population Characteristics and Descriptive Statistics Related to Use of an Alternative Therapist: HCSUS Baseline Sample, United States, 1996

	Population Characteristics[a]			
Variable	n[b]	Percentage[c]	% Using Alternative Therapist[d]	P[e]
Gender				<.001
Female	806	22.3	7.5	
Male	1939	77.8	17.7	
Race/ethnicity				<.001
White	1341	49.2	20.7	
African American	915	32.7	7.2	
Hispanic	400	14.9	12.3	
Other	89	3.3	31.3	
Age, y				.03
18–29	363	12.9	11.4	
30–39	1267	45.4	18.2	
40–49	843	30.5	13.6	
≥50	272	11.2	13.3	
Education				<.001
<High school	680	24.5	6.7	
High school or equivalent	773	27.4	12.4	
Some college	787	28.8	18.7	
≥College degree	505	19.4	25.8	
Income, $				<.001
0–4999	577	19.5	7.8	
5000–9999	706	25.6	13.6	
10 000–24 999	714	26.3	13.7	
25 000–39 999	325	12.0	16.5	
≥40 000	423	16.6	28.9	
Sexual orientation				<.001
Gay/lesbian	1206	46.4	23.9	
Heterosexual	1172	40.5	7.4	
Bisexual	165	6.2	11.8	
Other	202	6.9	8.4	
Region				<.001
Northeast	680	24.9	12.6	
Midwest	316	11.1	13.1	
South	873	35.4	8.2	
West	876	28.6	27.6	
Insurance coverage				.004
Uninsured	574	19.8	11.8	
Private insurance	824	31.7	22.1	
Medicaid	827	29.3	10.5	
Medicare	520	19.2	15.6	
Diagnosed with AIDS				ns (.06)
Yes	1087	38.7	17.9	
No	1658	61.3	13.8	
Lowest CD4 count				ns (.23)
≥500	239	9.4	12.8	
200–499	1048	37.2	14.0	
50–199	828	29.8	16.9	
0–49	630	23.5	16.9	

Continued

were collapsed into categorical variables for the descriptive and bivariate analyses; however, scales were subsequently entered into the regression models as continuous variables.

All analyses incorporated analytic weights that adjust for differential sampling probabilities, nonresponse, and multiplicity. The inverse of a respondent's sampling probability is the respondent's sampling weight, which adjusts for differential selection probabilities across subgroups of the population. Nonresponse weights adjust for differential cooperation rates and were constructed using the supplemental data (short-form and proxy interviews, and nonresponse data) collected on nonresponding patients and providers. Multiplicity weights adjust for the fact that some patients had more than 1 opportunity to enter the sample. The product of these 3 weights forms the analytic weight for each respondent,[37] which is equivalent to an estimate of the number of people represented by that respondent. To adjust the standard errors and statistical tests for the differential weighting and complex sample design, we used linearization methods[38] available in the Stata (Stata Corp, College Station, Tex) and SUDAAN (Research Triangle Institute, Research Triangle Park, NC) software packages.[37]

RESULTS

Characteristics of the Population

Table 1 presents weighted descriptive statistics for all independent variables. According to these estimates, 22.3% of people in care for HIV in early 1996 were female, and 75.9% were aged between 30 and 49 years. More than half were gay/lesbian (46.4%) or bisexual (6.2%). Although 49.4% were White, African Americans and Hispanics were overrepresented in comparison with the national population (32.7% were African American; 14.9% were Hispanic). Approximately half had a high school education or less (51.9%), and 45.1% had an income below $10 000. Most had some form of public insurance (31.7% had Medicaid; 19.2% had Medicare); however, 19.8% had no health insurance. Almost 35% lived in the South and only 11.3% lived in the Midwest.

In terms of respondents' disease stages, mental health, and substance use statuses,

TABLE 1—*Continued*

Screened positive for depression				.001
Yes	1028	37.1	18.9	
No	1717	62.9	13.3	
Any past-year drug use				.002
Yes	1403	50.7	18.5	
No	1342	49.3	12.2	
Heavy alcohol use, past 4 wk				ns (.62)
Yes	210	8.0	14.3	
No	2535	92.0	15.5	
ART is definitely worthwhile				ns (.12)
Yes	1238	47.5	13.7	
No	1507	52.5	16.9	
Preference to extend life				.003
Yes	1226	44.3	12.7	
No	1519	55.7	17.5	
Better informed than most				.003
Yes	1834	66.5	17.4	
No	911	33.5	11.4	
Information involvement score				.002
4.0	1596	56.9	18.2	
3.0–3.9	1039	38.7	12.0	
<3.0	110	4.4	8.9	
Degree of trust in medical provider score				ns (.12)
100	1248	48.8	13.9	
75–99	958	33.1	17.6	
0–74	508	18.1	15.9	
Discrimination by health care provider				<.001
Yes	885	31.1	20.7	
No	1860	68.9	13.0	
Decision involvement score				<.001
4.0	538	19.4	22.9	
3.0–3.9	1031	36.7	18.1	
<3.0	1176	43.9	9.8	

Note. ART = antiretroviral therapy; HCSUS = HIV Cost and Service Utilization Study; ns = not significant.
[a] All estimates are based on the analytic sample with no missing data; total unweighted sample size is 2745.
[b] Unweighted number of cases.
[c] Weighted percentages.
[d] Weighted percentages.
[e] Pearson's χ^2 statistic corrected for the survey design.

38.7% had been diagnosed with AIDS, and 53.3% had a lowest CD4 count of less than 200. Approximately 37% screened positive for depression, 49.3% had used drugs "on their own" in the past year, and 8% were classified as past-month heavy drinkers.

In terms of respondents' attitudes and beliefs about treatment and health care, approximately half (52.5%) believed that ART was definitely worthwhile, 44.3% expressed a preference for extending life over relieving pain, and 66.5% believed they were better informed than most. Respondents expressed a decided preference for information involvement; the mean score on this 4-point scale was 3.6, with 56.9% choosing the highest possible score. Although trust in medical providers was, on average, high (the mean score on this 100-point scale was 83.2), 31.1% reported that they had experienced some form of discrimination by a health care provider. The mean score on the 4-point decision involvement scale was 2.8, with 19.4% indicating the highest score possible. Approximately 44% scored below 3 on this scale.

Bivariate Analysis of Any Alternative Therapist Use

Overall, 15.4% of people in care for HIV in early 1996 had used an alternative therapist in the past 6 months. As shown in Table 1, there was substantial variation in use across subgroups of the population. All of the variables were significantly associated with having used an alternative therapist except the 2 disease-stage variables (diagnosed with AIDS and lowest CD4 count), heavy drinking, beliefs about the value of ART, and degree of trust in medical providers. Rates of use were particularly high (>20%) among Whites (20.7%), those with a college education or more (25.8%), those with an income above $40 000 (28.9%), those living in the West (27.6%), those who were privately insured (22.1%), those who had experienced discrimination by health care providers (20.7%), and those with the highest possible score on the decision involvement scale (22.9%). Rates of use were particularly low (<10%) among women (7.5%), African Americans (7.2%), those with less than a high school education (6.7%), those with an income below $5000 (7.8%), heterosexuals (7.4%), those living in the South (8.2%), and those with scores on the information and decision involvement scales below 3.0 (8.9% and 9.8%, respectively).

Multivariate Logistic Regression Analysis of Any Use of an Alternative Therapist

After adjusting for all other variables, we found several sociodemographic variables to be associated with having used an alternative therapist in the past 6 months (Table 2). The relative odds of having used an alternative therapist were significantly higher for people who were gay/lesbian compared with people who were heterosexual (adjusted odds ratio [AOR] = 1.95; 95% confidence interval [CI] = 1.24, 3.05); people with an income above $40 000 compared with people with an income below $5000 (AOR = 1.75; 95% CI = 1.10, 2.79); people who lived in the Northeast (AOR = 1.87; 95% CI = 1.08, 3.22) and the West (AOR = 2.56; 95%

TABLE 2—Multiple Logistic Regression Analysis of Use of Alternative Therapist and Ordinary Least Squares Regression Analysis of Number of Visits Logged Among Those With Any Use: HCSUS Baseline Sample United States, 1996

	Any Alternative Therapist Use		Log Number of Visits Among Those Who Use Therapist	
Variable (reference category or range)	AORs	95% CI	B	95% CI
Female (male = 0)	0.98	0.65, 1.46	0.23	−0.28, 0.74
Race/ethnicity (White)				
African American	0.76	0.46, 1.25	0.12	−0.23, 0.47
Hispanic	0.87	0.57, 1.31	−0.21	−0.52, 0.10
Other	1.77	0.89, 3.51	0.30	−0.19, 0.79
Age, y (18–29)				
30–39	1.25	0.87, 1.79	0.51**	0.18, 0.84
40–49	0.86	0.50, 1.48	0.52**	0.19, 0.85
≥ 50	1.11	0.58, 2.10	0.47	−0.12, 1.06
Education (< high school)				
High school or equivalent	1.35	0.69, 2.64	0.17	−0.32, 0.66
Some college	1.63	0.85, 3.11	0.22	−0.23, 0.67
≥ College graduate	1.73	0.98, 3.03	0.59*	0.10, 1.08
Income, $ (0–4999)				
5000–9999	1.34	0.82, 2.17	0.01	−0.28, 0.30
10 000–24 999	1.12	0.76, 1.66	−0.03	−0.44, 0.38
25 000–39 999	1.07	0.64, 1.80	0.03	−0.48, 0.54
≥ 40,000	1.75*	1.10, 2.79	−0.13	−0.56, 1.35
Sexual orientation (heterosexual)				
Gay/lesbian	1.95**	1.24, 3.05	0.05	−0.38, 0.48
Bisexual	1.17	0.66, 2.10	0.12	−0.43, 0.67
Other	0.81	0.50, 1.33	0.86**	0.33, 1.39
Geographic location (South)				
Northeast	1.87*	1.08, 3.22	0.20	−0.29, 0.69
Midwest	1.17	0.57, 2.39	0.08	−0.57, 0.73
West	2.56***	1.61, 4.07	0.20	−0.11, 0.51
Insurance (uninsured)				
Private	1.08	0.60, 1.92	0.43**	0.12, 0.74
Medicaid	1.11	0.58, 2.13	0.03	−0.32, 0.38
Medicare	1.06	0.64, 1.75	0.10	−0.25, 0.45
Has AIDS (no)	1.06	0.70, 1.60	0.08	−0.27, 0.43
Lowest CD4 count (≥ 500)				
200–499	1.11	0.65, 1.89	0.22	−0.29, 0.73
50–199	1.35	0.88, 2.07	0.05	−0.42, 0.52
0–49	1.37	0.85, 2.23	0.40	−0.17, 0.97
Screened positive for depression (no)	1.31*	1.03, 1.67	−0.11	−0.31, 0.09
Any past-year drug use (no)	1.04	0.78, 1.39	−0.01	−0.26, 0.24
Heavy alcohol use past 4 wk (no)	1.08	0.72, 1.62	−0.13	−0.58, 0.32
ART definitely worthwhile (no)	0.76	0.57, 1.01	0.09	−0.22, 0.40
Preference to extend life (no)	0.84	0.65, 1.08	0.04	−0.20, 0.28
Better informed than most (no)	1.03	0.75, 1.41	0.19	−0.08, 0.46
Information involvement (1–4)	1.52**	1.17, 1.98	−0.25	−0.50, 0.00
Degree of trust in medical provider (0–100)	1.00	0.99, 1.01	−0.01	−0.01, 0.00
Discrimination by health care provider (no)	1.36	1.00, 1.86	−0.06	−0.28, 0.16
Decision involvement (1–4)	1.18*	1.00, 1.40	0.13	−0.07, 0.33

Note. HCSUS = HIV Cost and Service Utilization Study; ART = antiretroviral therapy; AORs = adjusted odds ratios; CI = confidence interval; B = unstandardized ordinary least squares regression coefficient.
*P < .05; **P < .01; ***P < .001.

CI=1.61, 4.07), compared with those who lived in the South; people who screened positive for depression compared with those who screened negative (AOR=1.31; 95% CI=1.03, 1.67); and people who wanted more information involvement (AOR=1.52; 95% CI=1.17, 1.98) and more decision involvement (AOR=1.18, 95% CI=1.00, 1.40). Marginally significant (P<.06) associations were observed for 3 variables. The relative odds of alternative therapist use were marginally higher for people who had a college degree or more education compared with those with less than a high school education (P=.058) and for people who had experienced discrimination by a health care provider (P=.052). The relative odds of having at least 1 visit to an alternative therapist in the past 6 months were marginally lower for people who believed that ART was definitely worthwhile compared with those who did not hold this belief (P=.055).

Multivariate Analysis Among Alternative Therapist Users

Among those with any use of an alternative therapist in the past 6 months (unweighted n=425), 53.9% had fewer than 5 visits; 19.8% had 1 visit, 15.8% had 2 visits, 11.3% had 3 visits, and 7.1% had 4 visits. However, the number of visits ranged from 1 to 99. Because the distribution was highly skewed, a logarithmic transformation of the number of visits in the past 6 months was used as the dependent variable in this analysis.

Age and education were significantly associated with the log number of visits a person had in the past 6 months (Table 2). People in the midrange of the age distribution (aged 30–39 years and 40–49 years) had a significantly higher log number of visits than people aged 18 to 29 years, and people with college degrees or higher educational attainments had a significantly higher log number of visits than people with less than a high school education. Additionally, people classified into the category “other sexual orientation” had a significantly higher log number of visits than people classified as heterosexual. Overall, the set of 4 variables representing insurance status was marginally significant (P<.06); however, the contrast between having private insurance and having no insurance was statistically significant. People with private insurance had a significantly higher log number of visits in the past 6 months than people with no health insurance. The set of 3 variables measuring the lowest CD4 count was significantly related to the log number of visits overall, although no contrast was statistically significant (Table 2). Supplemental analyses (not shown) indicated that people with a lowest CD4 count in the range of 200 to 499 had a significantly higher log number of visits than people with lowest counts of 500 or above (B=–0.35, 95% CI=–0.10, –0.60, *P*=.01).

DISCUSSION

This study provides the first population-based estimates of the use of CAM provided by alternative therapists among people in care for HIV in the United States. Among people receiving regular medical care for HIV, 15.4% had seen an alternative therapist in the past 6 months. Additionally, 53.9% of those with at least 1 visit had 5 or fewer visits in 6 months. These estimates indicate that a sizeable minority of people who receive ongoing medical care for HIV also receive care from alternative providers.

The results reported in this study also indicate that several sociodemographic, clinical, and attitudinal variables are associated with the use of provider-based alternative care. This is most evident with respect to the use of any alternative therapist in the past 6 months. At the bivariate level, almost all of the variables considered in the analysis were significantly associated in the expected directions with any alternative therapist utilization. Broadly consistent with the profile widely reported in the literature, multivariate logistic regression analyses indicated that the odds of using an alternative therapist were higher among Whites, people who were gay/lesbian, had higher incomes, screened positive for depression, and wanted more information and decision involvement with their own care. The greater likelihood of using alternative therapists among patients in the Northeast and West may reflect, in part, a greater supply of these practitioners compared with the South. This profile is consistent with the notion that alternative therapist use is higher among individuals who are disposed to assume a very active role in knowledge acquisition and decisionmaking about their own care and who have adequate financial resources and access to providers. These results also suggest that some people who are depressed use alternative therapists as part of a strategy to manage their depression. One of our findings with respect to the number of visits also points to the role of economic resources; among those who used an alternative therapist, people who had private insurance had significantly more visits than people who did not have insurance. This suggests that private insurance reduces financial access barriers to some kinds of alternative therapists.

Although this study is the first to report population-based estimates of the use of complementary care provided by alternative therapists among people in care for HIV in the United States, it has a number of limitations. First, certain important subgroups of the population of people in care for HIV (e.g., Asian/Pacific Islanders) were relatively small in numbers, and they were not oversampled for this study. Although they are represented in the HCSUS sampling frame, the number selected into the sample was too small to allow us to produce precise subgroup estimates. Second, the exclusion of people who did not speak either English or Spanish may have led to underestimation of alternative therapist use. Third, some people may use CAM exclusively and would therefore have been excluded from the HCSUS sampling frame, which was based on people in conventional medical care.

Despite these limitations, the results reported here suggest that it will be important in the future to evaluate the extent to which care provided by medical and alternative care providers is coordinated, and whether care coordination varies across different types of providers. Additionally, we need further qualitative and quantitative examinations of how attitudinal factors shape the use of CAM in this population, and what sorts of barriers prevent the use of particular types of alternative therapists. We also need studies that address the limitations of the current investigation. Such information will enable us to better understand the effects of CAM on treatment outcomes, foster the coordination of care, and enhance the potentially beneficial complementarity of mainstream and alternative care for people infected with HIV. ■

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Contributors

A.S. London and J.A. Fleishman contributed to the primary study design, data collection, conceptualization of the research questions, analysis, and writing. C.E. Foote-Ardah contributed to the conceptualization, analysis, and writing of this paper. M.F. Shapiro contributed to the primary study design and data collection and reviewed the analysis and text.

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Human Participant Protection

Data collection was done in accordance with requirements of the institutional review boards at RAND and the primary data collection sites.

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