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Use of Provider Delivered Complementary and Alternative Therapies in Hawai'i: Results of the Hawai'i Health Survey

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Abstract

Background—Provider delivered complementary and alternative medicine (CAM) is used increasingly as a treatment option. Nevertheless, data related to the prevalence of provider delivered CAM (or PDCAM) use in diverse racial and ethnic populations is limited. The purpose of this investigation was to describe the use of provider delivered CAM in Hawaiian, Asian, and other Pacific Island populations in Hawai'i. The investigation was undertaken to test the hypothesis that a significant difference existed in the use of provider delivered CAM in Hawai'i because of the cultural diversity existing within the population.

Methods—The data were collected through the Hawai'i Health Survey (HHS). The HHS was administered by telephone among 5,000 stratified, randomly selected households, representing each of the Hawaiian Islands. Data was collected on all members of sample households. The sample population was statistically adjusted to represent the population of Hawai'i.

Results—Several factors emerged that may indicate increased use of provider delivered CAM. Most provider delivered CAM users are more educated, have incomes 200% or more above the poverty line, and reported either good or very good health status. Among respondents with poor

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Competing interests

None

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health status, 60.4% have used provider delivered CAM. Those with a body mass index indicating that they were overweight also reported a high level of provider delivered CAM use (51.4%). Similar percentages of both women and men use provider delivered CAM, while the youngest and oldest respondents reported the least use of provider delivered CAM. Whites (60.0%) and Koreans (56.6%) reported the highest percentage of use of provider delivered CAM, while African Americans (35.5%) and Filipinos (37.1%) report the lowest percentage. The majority of people without health insurance report provider delivered CAM use (53.7%). The highest portion of people who have used any alternative health care service is found among those whose pain severely interferes with normal work (78.3%).

Conclusions—The use of provider delivered CAM was found to be significantly greater in Hawaii compared with the mainland. Our results suggest the need for additional investigation of provider delivered CAM use in specific ethnic subpopulations.

Background

Provider delivered complementary and alternative medicine is defined as a group of diverse medical and healthcare systems, practices, and products not considered part of conventional medicine. Complementary medicine refers to therapies used with conventional medicine, and alternative medicine denotes therapies used in place of conventional medicine. According to several studies, complementary and alternative medicine (CAM) is increasingly used as a treatment option¹⁻¹¹. The investigators sought to: 1) Describe the use of provider delivered CAM in Hawaiian, Asian, and other Pacific Island populations in Hawai'i; 2) Explore reasons for its use within the diverse population of the state; and, 3) Compare the results with those of other surveys related to provider delivered CAM therapies. Exploration of provider delivered CAM use in Hawai'i was thought to be of particular significance because of the concentration of CAM schools in the State, state legislation favorable to provider delivered CAM, and the high concentration of immigrants who were thought to use provider delivered CAM. The investigation's focus was limited to provider delivered therapies, which require provider training or licensure, to assure some consistency in type of therapy used.

The National Institutes of Health (NIH) has categorized complementary and alternative medicine into five areas.¹² This investigation explored provider delivered therapies within four of these five areas. **Alternative therapies** are complete systems of theory and practice that include entities such as homeopathic and naturopathic medicine. Questions on this survey explored the use of Ayurveda, Naturopathy and Curanderismo. **Mind-body interventions** attempt to increase the mind's capacity to affect bodily function and systems and include hypnosis and meditation. **Biologically-based therapies** use substances found in nature for therapy, such as dietary supplements. These therapies were not explored in this investigation. **Manipulative and body-based methods** are based on manipulation and/or movement of one or more parts of the body and include chiropractic, chelation, and massage. Finally, **energy therapies** are of two types. Biofield therapies are intended to affect energy fields that surround and penetrate the human body and include Reiki, Acupuncture and Biofeedback. Bioelectromagnetic therapies involve an unconventional use of electromagnetic fields such as pulse and magnetic fields.

Several national surveys conducted in the United States (U.S.), United Kingdom (U.K.) and Canada reveal that CAM use is steadily increasing.^{1-11, 13} In 2002, 62% of adults in the U.S. were reported to have used CAM (including prayer for health) within the past 12 months, while 75% of adults reported having ever used CAM (including prayer for health).¹² The reported use of CAM has grown steadily since the 1950's.

Significantly, analysis of a pre-baby boom cohort showed 3 of 10 used CAM by 30 years of age, compared with 7 of 10 in a post-baby boom cohort.¹⁴⁻¹⁵ In another study in Canada and

the U.S., chiropractic was the most frequently used CAM therapy in both countries; use in Canada was three times higher than in the U.S. A survey in London revealed that CAM may be replacing conventional medicine in some cases, causing patients to decrease their use of conventional medicine.¹⁶ The lack of data on safety and efficacy of many CAM therapies gives rise to concern and necessitates further research on CAM.

Certain CAM therapies are more utilized than others. For example, a U.S. national survey reported that 43% of adults used prayer intended to improve their own health, 24.4% used prayer intended to improve another's health, 18.9% used natural products, 11.6% used deep breathing exercises, 9.6% used a prayer group, 7.5% used chiropractic, 5.1% used yoga, 5.0% used massage, and 3.5% used diet-based therapy.¹³ Of the 10 most commonly used therapies, most were mind-body therapies. The same survey found that CAM was most often used to treat back pain and problems, head and chest colds, neck pain and stiffness, anxiety and depression.¹³

Many investigators suggest the reason for CAM use is dissatisfaction with conventional medicine. In one study, 28% of CAM users report having the belief that conventional medicine would not help resolve their health problem, while another study found that negative attitudes towards conventional medicine were not associated with use of CAM.^{13,15} In a national survey, 79% of CAM users stated that using both CAM and conventional therapies was better than using either one alone.¹⁶ In another study, patients with more favorable attitudes towards self-directed treatment and active behavioral involvement were somewhat more likely to choose chiropractic physicians.¹⁷ CAM use also may result from an enthusiastic approach to exploring therapies that will reduce the unpleasant effects of disease.¹⁸ One survey found that 54.9% of adults used CAM because they thought it would be interesting to try.

Factors have been identified that are associated with increased CAM use. In the latest national study, women were found to be more likely to use CAM, with the largest differential occurring in relationship to mind-body therapies. Excluding prayer in the same study, the youngest and oldest respondents reported the least use of CAM.² Another study found factors associated with frequent use of CAM included full or partial insurance coverage (as opposed to no coverage) and using CAM therapy for wellness, back pain, or neck pain.¹⁹ A national survey found that users of both CAM and conventional medicine were more likely to be female, White, more educated, and live in the West. The same survey found that CAM users, when compared to non-users, were more likely to have poorer physical health.²⁰ Another study found that people with diabetes, cancer, or back or neck problems were more likely to see a CAM provider. The U.S. Centers for Disease Control and Prevention reported that 29% of adults used CAM in 1999, with 10% consuming herbal medicine. Women, people with higher levels of education and income, and patients with chronic illnesses used CAM most often.

Most current data are limited to the general U.S. population, but some study on CAM use has been conducted within racial and ethnic minority groups. In the latest national survey, adult African-Americans were found to be more likely to use mind-body therapies, including prayer (68.3%), compared to adult Caucasians (50.1%) and Asians (48.1%). Adult Asians were found more likely to use CAM, excluding megavitamin therapy and prayer (43.1%) compared to adult Caucasians (35.9%) and African-Americans (26.2%). Adult Caucasians were found more likely to use manipulative and body-based therapy (12.0%) compared with adult Asians (7.0%) and African-Americans (4.4%).¹³ Another study reported only 3-9% of visits to CAM practitioners were by non-African-Americans.¹³ Finally, a pilot study found that African-American women were less likely to see a chiropractor than Hispanic or Caucasian women.²¹

Despite studies assessing association of CAM with various factors and prevalence in countries such as the U.S., U.K., and Canada, little data exists regarding CAM use within Asian and

Pacific Islander populations. One of the few studies assessing CAM use in Hawai'i assessed cancer patients; 36% of participants had used CAM, most frequently religious or spiritual therapy. The same study found that CAM users tend to be younger, women, Catholic, and more educated.²² It also was reported that CAM users appear to report more symptoms and function less well emotionally than nonusers.¹³ Ethnic differences in CAM users with cancer were assessed, and Japanese participants were found less likely to use CAM than other ethnic groups.^{23,24}

The goal of this study was to establish the prevalence of provider delivered CAM use in the general population of Hawai'i. We also sought to identify demographic factors associated with the frequency of provider delivered CAM use. The investigation was undertaken to test the hypothesis that a significant difference existed in the use of provider delivered CAM in Hawai'i because of the cultural diversity prevalent within the population. The results were then compared with findings from past national surveys that contained information related to provider delivered CAM from the U.S., U.K., and Canada.¹⁻¹²

There is increasing evidence that provider delivered CAM therapies may be effective for specific conditions.²⁰ However use of untested provider delivered CAM modalities may have negative consequences, such as the use of ephedra. Provider delivered CAM users document that they do not share information about their use of CAM with conventional providers. Thus, information about provider delivered CAM use in ethnically diverse populations is urgently needed.

Methods

Data Source

The data were collected using the Hawaii Health Survey (HHS).²⁵ This survey was developed by the Hawaii State Department of Health (DOH) to provide estimates describing current health status, access to and utilization of health care, and distribution of the population by age, sex, and ethnicity. The survey is administered by the Hawaii State Department of Health Office of Health Status Monitoring (OHSM), and has been conducted by SMS Research & Marketing Services, Inc. since 1995. SMS performs survey design, instrumentation, sampling, data collection, and processing. The analyses reported in this study reflect data collected for the year 2003. All estimates of percents and frequencies and associated standard errors shown in this paper were generated with SUDANN, a software package designed to account for a complex sample design such as that used by the HHS.²⁶ The sample population is adjusted to accurately represent people in all four counties of Hawai'i, and to statistically reflect the population of Hawai'i. Though the survey population does not include those who are homeless or without a working phone, the use of census estimates of those without telephone service and the Hawai'i Homeless Study 2003 were used to interpret the results.

The estimates reported in this paper included age groups 18-24 years, 25-44 years, 45-64 years, and 65 years and over, unless otherwise noted. This allowed for comparisons with the NHIS.

Strengths and Limitations of the Data

A major strength of the data on provider delivered CAM in the HHS is that they were collected for a representative sample of the state's population. The HHS, a telephone survey, is conducted among 5,000 stratified, randomly selected households representing each of the Hawaiian Islands. The targeted population consists of over 1.2 million civilian non-institutionalized adults residing in approximately 410,000 households. Residents of long-term care institutions, correctional facilities, and active duty Armed Forces personnel were excluded. The sample is selected each year based on a multistage cluster sample design. All questions are asked of all

respondents regardless of gender, despite the fact that 65 to 70% of respondents were women. The large sample facilitated investigation of other self-reported health characteristics reported on the HHS such as health behaviors, chronic conditions, injury episodes, access to care and medical insurance coverage.

The HHS has been expanded in length and content over the years to accommodate different clients, including the DOH Family Health Division, Papa Ola Lokahi, the DOH Mental Health Division, the University of Hawai'i John A. Burns School of Medicine, Queen's Health Systems, Kamehameha Schools, and others. The survey has been specifically modified to assess provider delivered CAM use among Asian Americans, Native Hawaiians, and other Pacific Islander populations in Hawai'i.²⁶

The provider delivered CAM questions have several limitations. First, they are dependent on the respondents' knowledge of provider delivered CAM therapies. Second, collection of data at only two points results in an inability to produce changes that can be tracked over time, and reduces reliable estimates for provider delivered CAM use for small populations subgroups. Nevertheless, these data for the two consecutive years were consistent.

Results

Use of Provider Delivered CAM

Overall, 49.9% of adults in Hawai'i were found to use provider delivered CAM services. While the NHIS data reveal that 75% of respondents used CAM for health reasons, if this estimate is corrected for prayer use, only 25% of national respondents had used provider delivered CAM therapies. Thus, the rate of provider delivered CAM in Hawai'i is significantly higher than that reported in the NHIS. Massage therapy was the most used service (31.7%), followed by chiropractry (30.4%) and acupuncture (16.2%). Table 1, below, compares these data with the most recent national data that relates to provider delivered CAM therapies.

As shown above, with the exception of Ayurveda, use of provider delivered CAM services in Hawai'i is significantly higher than rates reported in the mainland U.S. The island of Maui had the highest proportion (58.7%) of residents who had used provider delivered CAM services. Those of 1% to 24% Native Hawaiian ancestry used the highest proportion of any alternative health care services (59.9%).

Relationship of Provider Delivered CAM and Demographic Characteristics

Provider delivered CAM use also was analyzed according to **age**. Massage therapy is used by approximately 30% of those between 35 to 54 years and 22.9% of those 75 or older. Those >45 years of age or older had the highest proportion of overall provider delivered CAM use (54.9%).

As for **gender**, female and male use was comparable (51.2% and 48.4%, respectively). Massage was the provider delivered CAM therapy used most by both males (30.4%) and females (33.0%).

Provider delivered CAM use also was assessed in relation to **marital status**, and **households with children**. Married people used provider delivered CAM more frequently than unmarried couples, widows, or those who were divorced, separated, or never married. Massage therapy was used most among those who were married (30.5%). Chiropractry was used most among those who were separated, widowed, or divorced (38.4%). All provider delivered CAM therapies and specifically massage therapy was used most among those with no children under eighteen (33.5%).

Use of PDCAM by Selected Characteristics

The use of PDCAM in Hawaii in relationship to selected factors is summarized in Table 2 A and B

PDCAM Use and Military Service

- Massage therapy was the most frequently used service by those who answered “yes” to being active in military service (21.6%).

PDCAM Use and Duration of Time in Hawai'i

- Massage therapy was the most frequently used service among those had lived in Hawaii for 10 years or less (35.8%).
- Chiropractic was the most frequently used service (29.6%) among those who had lived in Hawaii for a lifetime.
- The largest percentage of CAM users had been in Hawaii for 11 to 20 years

PDCAM Use and Ethnicity

- Massage therapy was the CAM used most frequently by Koreans (43.4).
- Chiropractic was used most frequently by those who identified their ethnicity as Hawaiian/Part Hawaiian (31.4%).
- Caucasians had the highest percentage of people using any provider delivered CAM therapy (60.0%) and African-Americans had the lowest percentage (35.5%).

PDCAM Use and Education

- Chiropractic was used most frequently by those who had some high school or less (31.7%) or were high school graduates (30.7%)
- Those who had a baccalaureate degree or more constituted the highest percentage of people who had used any CAM service (54.8%).

PDCAM use and Economic Status

- Massage therapy was the CAM therapy used most across all income groups, except for those with a household income of \$50,000 to \$74,999 where was the CAM therapy used most (34.7%).
- The highest proportion of people who had used any type of provider delivered CAM (54.1%) were those with a household income of \$50,000 to \$74,999.
- Massage therapy was the type of CAM used most frequently across all poverty status levels, with the exception of chiropractic.
- Those 200 to 399% below the poverty level used chiropractic the most frequently (30.6%).
- The majority of CAM users had incomes exceeding 200% of the poverty line.
- Respondents who had 1 person employed in the household were the majority of users for all alternative health services.

PDCAM Use and Household Size

- Massage therapy was the most used therapy across all household sizes, except those with a household size of five, where chiropractic was the most used service (28.2%).

- The highest proportion of people who had used any CAM service were those with a household size of 1-2 (54.7%) and 3 (50.1%).
- Hypnosis therapy was the most frequently reported CAM service used by respondents living in household with 0 (30.6%), 1-2 (33%), 3-4 (27.0%), and >5 (19.8%) persons employed.

PDCAM Use and Health Insurance

- Massage therapy was the most frequently used CAM service by both people with health insurance (31.4%) and those without health insurance (36.5%).
- The highest portion of people who had used any CAM were people without health insurance (53.7%).

PDCAM Use and Health

- Most CAM users did not have high cholesterol, asthma, diabetes, arthritis, and did not smoke.
- Ayurveda had the highest portion of users who did smoke cigarettes (20.9%) and smoked inside the home (20.0%).
- Most CAM users were active, able to physically accomplish what they wished, and reported emotional health.
- Biofeedback had the highest proportion of users who reported activity limitations (e.g., moving a table) (17.2%) followed by users of chelation (15.4%).
- Massage therapy was the CAM service used most across all general health status and body mass index levels
- Those with a body mass index indicating that they were overweight used massage and chiropractry the most, at equal rates (31.4%)
- Those reporting a poor health status constituted the highest proportion of people who had used any CAM (60.4%), as did those who had body mass index indicating that they were overweight (51.4%).
- Those with arthritis made up the highest proportion of people who had used any CAM service (62.1%).
- Massage therapy was used most frequently by those who reported limited activity (move a table, etc), accomplished less due to physical health, limited work due to physical health, accomplished less due to emotional health, limited work due to emotional health, had pain interfering with normal work, feeling peaceful and calm, having a lot of energy, feeling down-hearted and blue, and having problems interfering with social activities.
- CAM users saw a MD often (74.6%), did not have any household member admitted as an in-patient (60.7%), did not go to the emergency room (ER) or urgent care center in past year (82.7%),
- Had physical exam less than two years ago (73.1%), did not have a doctor who prescribed medication for a short-term condition (69.3%), and filled medical prescriptions every time (82.9%).
- Did not report being referred to a medical specialist (51.9%). Most users of CAM services did not have a doctor who had prescribed medication for a condition that lasted more than a year (63.4%)

PDCAM Use and Use of Native Hawaiian Healing Practices

- Most users of CAM did not use the Native Hawaiian Health Care system (91.1%), did not use Lomilomi (76.2%), Ho'oponopono (93.1%), La'au Lapa'au (92.5%), or use other traditional Hawaiian health practices (96.1%).

Discussion

There are marked differences in provider delivered CAM use rates in Hawai'i compared to recent data based on the NHIS.¹³ In Hawai'i, factors associated with increased use of provider delivered CAM include:

- the majority of CAM users are better educated
- over 2/3 have incomes exceeding 200% of the poverty line
- the highest percentage of users have either very good (31.6%) or good (29.2) health status
- among respondents with a poor health status, 60.4% have used CAM
- among respondents that are overweight, 51.4% have used CAM
- women (52.1%) use CAM in greater frequency compared with men (47.9%)
- the youngest and oldest respondents have the least use of CAM
- Caucasians have the highest percentage of use of provider delivered CAM therapy (60.0%), while Filipinos have the lowest percentage (37.1%)
- people without health insurance constituted the highest portion of people who have used any CAM (53.7%)
- the highest portion of people who have used any alternative health care service is found among those whose pain extremely interfered with normal work (78.3%)

These findings are not consistent with national data suggesting that additional investigation of ethnic factors associated with CAM use is warranted. The use of provider delivered CAM in Hawaii is significantly greater than CAM use reported on the mainland, and several factors appear to emerge. These factors need further exploration, and the potential health implications and economic consequences of CAM use should be assessed.

Conclusions

As described, the Hawai'i Health Survey has revealed that provider delivered CAM use differs significantly between Native Hawaiian, Asian and other Pacific Island populations in Hawai'i, as well as from use rates reported on the mainland. In fact, CAM use rates in Whites differ significantly from rates reported in the mainland U.S. Additional data is needed to consider both the basic and broader implications of these findings. Further investigation of correlates of CAM use in Hawaiian, Asian and other Pacific Island populations is urgently needed. Such investigation would benefit from systematic assessment of use of CAM therapies that do not require provider delivery, such as prayer and use of herbal products. Investigations also are needed to explore the possibility of relationships between CAM use and health outcomes. Ethnic factors associated with CAM use should also be considered in light of health disparities in diverse populations. Hawai'i offers unique opportunities, given the diversity of its population, the existence of CAM schools, and the prevalence of CAM use, for studying factors related to CAM use as it occurs in diverse populations.

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References

1. Astin JA. Why patients use alternative medicine: results of a national study. *JAMA* May 20;1998 279 (19):1548–53. [PubMed: 9605899]
2. Bausell RB, Lee WL, Berman BM. Demographic and health-related correlates to visits to complementary and alternative medical providers. *Med Care* Feb.;2001 39(2):190–6. [PubMed: 11176556]
3. Druss BG, Rosenheck RA. Association between use of unconventional therapies and conventional medical services. *JAMA* Aug. 18;1999 282:651–6. [PubMed: 10517718]
4. Eisenberg DM, Kessler RC, Foster C, et al. Unconventional medicine in the United States. Prevalence, costs, and patterns of use. *N Engl J Med* Jan. 28;1993 328(4):246–52. [PubMed: 8418405]
5. Eisenberg DM, Davis RB, Ettner SL, et al. Trends in alternative medicine use in the United States, 1990–1997: results of a follow-up national survey. *JAMA* Nov. 11;1998 280(18):1569–75. [PubMed: 9820257]
6. Landmark Healthcare, Inc. The Landmark Report on Public Perceptions of Alternative Care. Landmark Healthcare Inc.; Sacramento, CA: 1998.
7. Mackenzie ER, Taylor L, Bloom BS, et al. Ethnic minority use of complementary and alternative medicine (CAM): A national probability survey of CAM utilizers. *Alternative Therapies in Health and Medicine* 2003;9(4):50–56. [PubMed: 12868252]
8. Ni H, Simile C, Hardy AM. Utilization of complementary and alternative medicine by United States adults: Results from the 1999 National Health Interview Survey. *Med Care* Apr.;2002 40(4):353–8. [PubMed: 12021691]
9. Oldendick R, Coker AI, Weiland D, et al. Population-based survey of complementary and alternative medicine usage, patient satisfaction, and physician involvement. *Southern Medical Journal* 2000;93 (4):375–81. [PubMed: 10798505]
10. Paramore LC. Use of alternative therapies: Estimates from the 1994 Robert Wood Johnson Foundation National Access to Care Survey. *J Pain Symptom Manage* Feb.;1997 13(2):83–9. [PubMed: 9095565]
11. Rafferty AP, McGee HB, Miller CE, Reyes M. Prevalence of complementary and alternative medicine use: State-specific estimates from the 2001 Behavioral Risk Factor Surveillance System. *Am J Public Health* 2002;92(10):1598–1600. [PubMed: 12356602]
12. National Center for Complementary and Alternative Medicine: What is Complementary and Alternative Medicine? National Institutes of Health. 2002
13. Barnes, PM.; Powell-Griner, E.; McFann, K.; Nahin, RL. Advance data from vital and health statistics. National Center for Health Statistics; Hyattsville, Maryland: 2004. Complementary and alternative medicine use among adults: United States, 2002.
14. Kessler RC, Davis RB, Foster DF, Van Rompay MI, Walters EE, Wilkey SA, Kaptchuk TJ, Eisenberg DM. Long-term Trends in the Use of Complementary and Alternative Medical Therapies in the United States. *Ann Intern Med* 2001;135:262–268. [PubMed: 11511141]
15. McFarland B, Bigelow D, Zani B, Newsom J, Kaplan M. Complementary and Alternative Medicine Use in Canada and the United States. *Am J Public Health* 2002;92:1616–1618. [PubMed: 12356610]
16. Sharples FM, van Haselen R, Fisher P. NHS patients' perspective on complementary medicine: a survey. *Complement Ther Med* 2003;11(4):243–248. [PubMed: 15022657]
17. Wolsko PM, Eisenberg DM, Davis RB, Ettner SL, Phillips RS. Insurance Coverage, Medical Conditions, and Visits to Alternative Medicine Providers: Results of a National Survey. *Arch Intern Med* 2002;162:281–287. [PubMed: 11822920]
18. Eisenberg DM, Kessler RC, Van Rompay MI, Kaptchuk TJ, Wilkey SA, Appel S, Davis RB. Perceptions about Complementary Therapies Relative to Conventional Therapies among Adults Who Use Both: Results from a National Survey. *Ann Intern Med* 2001;135:344–351. [PubMed: 11529698]

19. Sharma R, Haas M, Stano M. Patient Attitudes, Insurance, and Other Determinants of Self-Referral to Medical and Chiropractic Physicians. *Am J Public Health* 2003;93:2111–2117. [PubMed: 14652343]
20. Thorne S, Paterson B, Russell C, Schultz A. Complementary/Alternative Medicine in Chronic Illness as informed self-care decision making. *International Journal of Nursing Studies* 2002;39:671–683. [PubMed: 12231024]
21. Cherkin DC, Deyo RA, Sherman KJ, Hart LG, Street JH, Hrbek A, Cramer E, Iliman B, Booker J, Mootz R, Barassi J, Kahn JR, Kaptchuk TJ, Eisenberg DM. Characteristics of Visits to Licensed Acupuncturists, Chiropractors, Massage Therapists, and Naturopathic Physicians. *J Am Board Fam Pract* 2002;15:463–472. [PubMed: 12463292]
22. Factor-Litvak P, Cushman L, Kronenberg F, Wade C, Kalmuss D. Use of Complementary and Alternative Medicine Among Women in New York City: A Pilot Study. *J Altern Complement Med* 2001;7:659–666. [PubMed: 11822614]
23. Gotay CC, Hara W, Issell BF, Maskarinec G. Use of Complementary and Alternative Medicine in Hawaii Cancer Patients. *Hawaii Med J* 1999;58:94–98. [PubMed: 10363431]
24. Maskarinec G, Shumay D, Kakai H, Gotay CC. Ethnic Differences in Complementary and Alternative Medicine Use Among Cancer Patients. *J Altern Complement Med* 2000;6:531–538. [PubMed: 11152058]
25. Shah, BV.; Barnwell, BG.; Hunt, PN.; LaVange, LM. SUDANN user's manual, release 5.50. Research Triangle Institute; Research Triangle Park, North Carolina: 1991.
26. <http://www.state.hi.us/doh/stats/surveys/hhs.html>

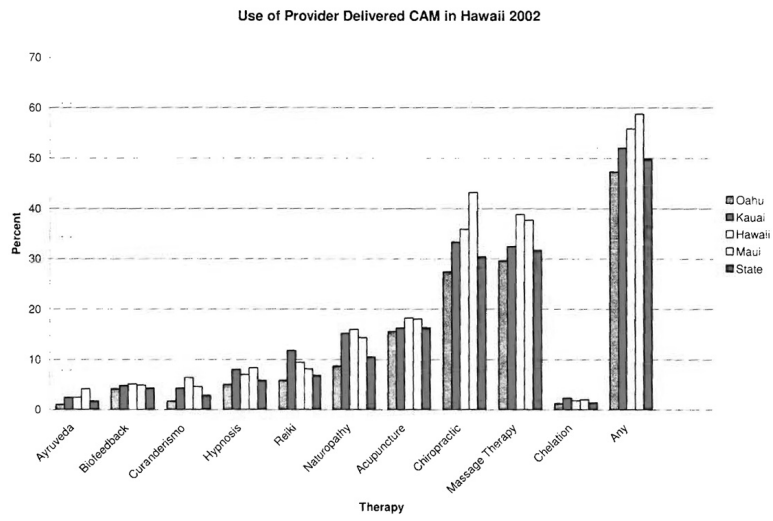


Figure 1.
Use of Provider Delivered CAM in Hawai'i 2002

Table 1

Comparison of provider delivered CAM use in adults over 18 by type of therapy between Hawai'i (2003) and the United States (U.S.) 2002

Therapy	Rate of Use in Hawai'i	Rate of Use in U.S.
Acupuncture	16.2%	4.0%
Ayurveda	1.7%	4.0%
Biofeedback	4.3%	1.0%
Chelation	1.4%	0.1%
Chiropractic	30.4%	19.9%
Chiropractic	2.8%	1.8%
Energy Healing	6.8%	1.1%
Hypnosis	5.8%	1.8%
Massage	31.7%	9.3%
Naturopathy	10.6%	0.9%

Table 2a

PREVALENCE OF ALTERNATIVE HEALTH CARE SERVICES USE

	Acupuncture Col%	Ayurveda Col%	Biofeedback Col%	Chelation Col%	Chiropractic Col%	Reiki Col%	Curanderismo Col%	Hypnosis Col%	Massage Therapy Col%	Naturopathy Col%	Any One Col%
DEMOGRAPHICS											
Poverty Status	9.5	7.5	11.2	14.1	10.2	10.7	16.3	13.6	10.3	7.6	10.2
0 to 100%											
100 to 185%	15.4	8.4	11.9	20.2	15.5	14.3	12	13.6	13.7	16.2	14.7
185 to 200%	1.7	4.1	0.4	--	1.4	1.8	9.4	3.2	2.6	2.5	2.1
over 200%	73.5	80.1	76.5	65.7	72.9	73.1	62.4	69.5	73.4	73.7	73
TOTAL	100	100	100	100	100	100	100	100	100	100	100
No. of persons employed	30	20.3	27.9	38.3	23.5	25.5	32.1	27.8	22.8	24.2	24.6
0											
1	33.8	43.6	37.9	27.4	36	30	34.3	30.3	35.3	36.6	35.1
2	29.5	35.4	32.1	33	32.3	39.3	28.4	36.4	33.6	32.2	31.7
3	5.7	0.6	1.8	1.2	4.1	4.3	4.6	4.1	6.3	5.2	6.6
4	0.4	--	0.3	--	1.2	0.9	0.6	1.4	1.4	1.3	1.2
5 or more	0.7	--	--	--	0.7	--	--	--	0.6	0.5	0.8
TOTAL	28.76	15.29	35.37	32.71	26.02	25.2	30.3	24.35	24.2	27.82	26.34
High cholesterol?											
Yes	71.24	84.71	64.63	67.29	73.98	74.8	69.7	75.65	75.8	72.18	73.66
No	100	100	100	100	100	100	100	100	100	100	100
TOTAL	9.33	10.14	15.93	5.62	9.37	11.84	20.68	15.32	8.69	11.34	9
Has asthma?											
Yes	90.67	89.86	84.07	94.38	90.63	88.16	79.32	84.68	91.31	88.66	91
No	100	100	100	100	100	100	100	100	100	100	100
TOTAL	26.95	7.46	32.93	33.6	23.31	23.49	24.05	20.36	21.84	21.77	24.59
Has hypertension?											
Yes	73.05	92.54	67.07	66.4	76.69	76.51	75.95	79.64	78.16	78.23	75.41
No	100	100	100	100	100	100	100	100	100	100	100
TOTAL	9.79	1.16	4.51	11.65	6.28	7.43	9.26	4.73	6.35	6.34	6.8
Has diabetes?											
Yes	90.21	98.84	95.49	88.35	93.72	92.57	90.74	95.27	93.65	93.66	93.2
No	100	100	100	100	100	100	100	100	100	100	100
TOTAL	21.86	18.93	27.3	9.64	18.88	21.06	23.49	15.13	17.52	16.47	16.93
Has arthritis?											
Yes	78.14	81.07	72.7	90.36	81.12	78.94	76.51	84.87	82.48	83.53	83.07
No	100	100	100	100	100	100	100	100	100	100	100
TOTAL	15.58	20.85	17.02	5.55	15.29	14.82	16.58	19.25	15.75	16.95	15.42
Smoke Cigarette?											
Yes	84.42	79.15	82.98	94.45	84.71	85.18	83.42	80.75	84.25	83.05	84.58
No	100	100	100	100	100	100	100	100	100	100	100
TOTAL	12.63	19.96	18.33	5.7	12.26	7.85	16.62	13.23	12.3	11.22	12.31
Smoking inside home											
Yes	87.37	80.04	81.67	94.3	87.74	92.15	83.38	86.77	87.7	88.78	87.69
No	100	100	100	100	100	100	100	100	100	100	100
TOTAL	10.03	4.06	17.15	15.44	7.48	9.65	13.92	7.32	7.75	8.49	6.99
Limited activity: move table, etc.											
Yes, limited a lot	7.24	3.25	12.1	10.92	6.1	8.01	7.62	11.37	6.81	6.1	6.8
Yes, limited a little	82.12	92.42	70.64	73.32	86.07	80.85	78.46	81.24	85.11	85.32	86
No, not limited at all	0.62	0.26	0.1	0.32	0.35	1.5	---	0.08	0.33	0.09	0.21
DK/NOT SURE	100	100	100	100	100	100	100	100	100	100	100
TOTAL	6.98	2.15	14.17	16.22	5.74	8.73	8.84	4.24	5.39	5.61	5.35
Limited activity: Climb stairs											
Yes, limited a lot	10.22	3.22	12.22	6.65	7.39	7.15	10.8	11.84	7.56	6.59	7.59
Yes, limited a little	82.62	94.37	73.31	76.81	86.59	83.4	80.36	83.75	86.93	87.73	86.77
No, not limited at all	0.17	0.26	0.29	0.32	0.23	0.71	---	0.17	0.27	0.07	0.27
DK/NOT SURE	---	---	---	---	0.05	---	---	---	---	---	0.03
REFUSED	---	---	---	---	100	---	---	---	---	---	---
TOTAL	100	100	100	100	100	100	100	100	100	100	100

DEMOGRAPHICS	Acupuncture Col%	Ayurveda Col%	Biofeedback Col%	Chelation Col%	Chiropractic Col%	Reiki Col%	Curanderismo Col%	Hypnosis Col%	Massage Therapy Col%	Naturopathy Col%	Any One Col%
Accomplish less due to physical health	22.35	22.17	33.65	32.33	19.54	26.68	39.59	19.56	19.24	21.38	18.36
Yes											
No	77.43	77.5	66.01	66.35	80.02	72.46	60.2	80.26	80.36	78.28	81.21
Don't know/Not sure	0.22	0.34	0.34	1.32	0.44	0.86	0.21	0.18	0.4	0.34	0.43
TOTAL	100	100	100	100	100	100	100	100	100	100	100
Limited work due to physical health	22.93	21.69	32.61	31.23	18.56	25.14	35.2	20.08	18.89	20.35	18.24
Yes											
No	76.57	77.97	67.39	67.86	81.21	73.85	62.45	78.91	80.76	78.73	81.43
Don't know/Not sure	0.49	0.34	---	0.91	0.24	1	2.36	1.01	0.35	0.93	0.33
TOTAL	100	100	100	100	100	100	100	100	100	100	100
Accomplish less due to emotional health	9.3	9.33	13.29	7.96	9.52	10.32	14.84	12.56	9.54	7.95	9.04
Yes											
No	90.6	89.96	86.33	90.81	90.34	89.5	84.56	87.15	90.32	91.78	90.84
Don't know/Not sure	0.1	0.7	0.39	1.23	0.14	0.18	0.6	0.29	0.14	0.28	0.12
TOTAL	100	100	100	100	100	100	100	100	100	100	100
Limited work due to emotional health	8.16	8.67	12.86	6.51	7.75	8.43	15.5	12.15	8.88	7.5	7.91
Yes											
No	91.3	91.16	85.91	92.37	91.72	90.95	84.31	87.7	90.74	91.87	91.66
Don't know/Not sure	0.54	0.17	1.22	1.12	0.53	0.63	0.19	0.15	0.38	0.62	0.42
TOTAL	100	100	100	100	100	100	100	100	100	100	100
MD seen most often	76.8	58.1	79.9	86.7	75	74.9	71.7	77.2	73.2	72.1	74.6
Yes											
No	23.1	41.9	20.1	13.3	24.7	24.9	28.3	22.6	26.4	27.8	25.1
DK/NOT SURE	0.1	--	--	--	0.3	0.2	--	0.2	0.4	0.1	0.4
TOTAL	100	100	100	100	100	100	100	100	100	100	100
Any HH member admitted as inpatient	34.7	39.1	48.7	50.2	39.9	35.8	42.4	39.5	38	39.9	38
Yes											
No	63.7	60.9	50.1	46	58.9	62.9	54.8	60.2	60.7	59.2	60.7
Can't Remember	1.6	--	1.2	3.8	1.2	1.3	2.8	0.3	1.3	0.9	1.3
REFUSED	--	--	--	--	0	--	--	--	0	0	0
TOTAL	100	100	100	100	100	100	100	100	100	100	100
Referred to a medical specialist	52.2	46	61.6	57.1	50.7	54.3	54	47.4	50.9	53.9	47.6
Yes											
No	47	54	38.2	42.9	48.7	44.7	45.8	52.5	48.9	45.7	51.9
Can't Remember	0.3	--	0.1	--	0.2	1	--	0.2	0.2	0.3	0.3
REFUSED	0.5	--	0.1	--	0.3	--	0.2	--	0	0.1	0.2
TOTAL	100	100	100	100	100	100	100	100	100	100	100
Went to ER or urgent care center in past year	19.8	22.3	28.6	19.7	18.5	21.2	21.9	18.8	17.8	19.3	17.3
Yes											
No	80.2	77.7	71.4	80.3	81.5	78.8	78.1	81.2	82.2	80.7	82.7
TOTAL	100	100	100	100	100	100	100	100	100	100	100
When was the last physical exam	72.7	75.7	80	78.2	74	78.1	71.7	76.5	72.9	70.9	73.1
Less than 2 yrs ago											
More than 2 yrs ago	27.3	24.3	20	21.8	26	21.9	28.3	23.5	27.1	29.1	26.9
TOTAL	100	100	100	100	100	100	100	100	100	100	100
Doctor prescribed medication for condition that lasted more than a year	43.8	29.4	48.7	50.9	36.7	44.4	46	38.7	35.4	37.7	36.2
Yes											
No	55.3	70	50	49.1	62.6	54.5	53.6	60.2	64.3	62.2	63.4
Can't Remember	0.9	0.6	1.3	--	0.6	1.1	0.3	1.1	0.3	0.1	0.4
REFUSED	--	--	--	--	0	--	--	--	0	0	0

Harrigan et al.

DEMOGRAPHICS		Acupuncture	Ayurveda	Biofeedback	Chelation	Chiropractic	Reiki	Curanderismo	Hypnosis	Massage Therapy	Naturopathy	Any One
		Col%	Col%	Col%	Col%	Col%	Col%	Col%	Col%	Col%	Col%	Col%
TOTAL		29.8	25	26.6	29.7	29.4	31.1	46.4	28.6	31.4	29.2	30.1
Doctor prescribed medication for short-term condition												
Yes	%											
No	%	69.5	75	72.1	70.3	69.8	68.9	53.4	70.3	68.2	70.7	69.3
Can't Remember	%	0.7	--	1.3	--	0.7	0	0.1	1.1	0.4	0.1	0.6
REFUSED	%	--	--	--	--	0	--	--	--	0	0	0
TOTAL	%	100	100	100	100	100	100	100	100	100	100	100
# of times filed medical prescriptions every time	%	85	83.7	93.1	94.3	83.1	76.3	79.5	83.5	79.5	80.3	82.9
most of the time	%	10.9	9.3	5.2	3.8	11.4	18.8	14.6	13.5	12.8	16.4	11.4
missed few times	%	1.1	3.8	0.7	0.8	1.5	1	1.9	2.3	2	1.4	1.6
not too often	%	2	1.7	0.4	0.3	1.6	3.1	3.1	0.1	2.7	1	1.8
never	%	0.9	1.6	0.6	0.8	1.1	0.4	0.9	0.6	1.8	0.7	1.5
Can't remember	%	0.1	--	--	--	1.2	0.4	--	--	1.2	0.3	0.8
Refused	%	0.1	--	--	--	0.1	--	--	--	0	--	0.1
Total	%	100	100	100	100	100	100	100	100	100	100	100
Use Native Hawaiian Health Care System?	%	6.7	3.4	1.2	10.3	11.9	11	10.2	11.2	12.5	11.7	8.9
1	%											
2	%	93.3	96.6	98.8	89.7	88.1	89	89.8	88.8	87.5	88.3	91.1
Total	%	100	100	100	100	100	100	100	100	100	100	100
Lomolomi												
1	%	31.1	40.6	31.1	29	24.1	49.1	55.2	28.5	28.7	39.8	23.4
2	%	68.5	59.2	68.6	70	75.7	50.7	44	71.2	70.6	60.1	76.2
3	%	0.5	0.2	0.3	1	0.1	0.2	0.9	0.2	0.7	0	0.4
Total	%	100	100	100	100	100	100	100	100	100	100	100
Ho'oponopono												
1	%	9.1	16.6	13.2	12.3	6.2	14.2	22.1	7.7	6.9	11.6	6.2
2	%	90.3	82.9	86.1	86.3	93.3	84.5	74.1	89.7	92.1	87.5	93.1
3	%	0.6	0.5	0.7	1.4	0.4	1.3	3.7	2.5	0.9	0.9	0.7
Total	%	100	100	100	100	100	100	100	100	100	100	100
Lai au Lapa au												
1	%	11.1	14.5	9.9	15	7.6	15	26	9.7	7.8	17.5	6.8
2	%	87.7	85.5	89.7	84	91.8	84.7	72.9	90.1	91.3	82.3	92.5
3	%	1.3	--	0.5	1	0.6	0.3	1.1	0.2	0.9	0.2	0.7
Total	%	100	100	100	100	100	100	100	100	100	100	100
Used Other traditional Hawaiian health practice												
1	%	4.2	10.1	7.3	12.3	3.7	7.1	21.3	4.5	4.8	5.2	3.8
2	%	95.6	89.7	92.3	86.5	96.2	92.6	77.6	95.3	95.1	94.7	96.1
3	%	0.2	0.2	0.4	1.2	0.1	0.3	1	0.3	0.1	0.2	0.1
Total	%	100	100	100	100	100	100	100	100	100	100	100

Table 2b

PREVALENCE OF ALTERNATIVE HEALTH CARE SERVICES USE

	Any Medical Service Row %	Acupuncture Row %	Ayurveda Row %	Biofeedback Row %	Chelation Row %	Chiropractic Row %	Reiki Row %	Curanderismo Row %	Hypnosis Row %	Massage Therapy Row %	Naturopathy Row %
Ethnicity	60	21.6	3.6	7.6	2	39.2	9.4	4.7	9	40.1	16.3
White	35.5	11.3	--	2.3	--	20.9	0.5	1.4	0.8	24.8	5.3
Black/ African American	44	14.6	0.1	3.2	1.6	24.5	6.2	1.2	3.3	25.9	6.3
Japanese	50.5	19.5	--	3.1	1.9	20.3	2.9	0.8	2.4	26.5	10.7
Chinese	37.1	5.1	0.5	0.9	0.8	21.4	3.6	0.3	2.4	24.1	7.3
Filipino	56.6	18.5	--	--	--	36.6	10.8	--	8.8	43.4	--
Korean	45	19	--	--	--	26.3	--	--	--	31.8	--
Samoan/Tongan	39.6	15.4	0.4	2.7	0.2	26.7	2.4	1.7	9	19.6	7.8
Other One Ethnicity	50.7	15.8	2.1	3.8	2.1	29.3	8.3	4.5	6.5	32	8.3
Mixed (except Hawaiian)	47.7	14	1.5	3.1	0.4	31.4	6.7	2.5	6.2	31.1	10.5
Hawaiian/Part Hawaiian	55.4	25.8	1.5	6.8	1.3	37.8	2.8	4.4	2.4	36.1	6.6
Don't know/Refused	49.9	16.2	1.7	4.3	1.4	30.4	6.8	2.8	5.8	31.7	10.6
Group Total	37.6	5.1	--	1.4	1.4	21.4	3.6	0.5	4	21.6	9.7
Anyone active in military service											
Yes	50.9	17.1	1.8	4.6	1.4	31.2	7.1	3	5.9	32.6	10.7
No	49.9	16.2	1.7	4.3	1.4	30.4	6.8	2.8	5.8	31.7	10.6
Group Total	50.1	14.1	2.7	4.8	2.4	28.9	7.5	4.2	7.3	35.8	13.2
Years in Hawaii											
10 or less	53.4	19.3	3.1	5.9	1.5	33.9	8.6	4.5	7.8	35	12.8
11 to 20	50.9	21.5	1.8	4.9	0.7	31.8	6.3	3.5	5.3	32	10
More than 20, not lifetime	48.3	13.7	0.7	3.4	1.3	29.6	6.3	1.2	4.6	28.6	9
Lifetime	30.2	0.8	--	--	--	13.7	--	--	16.5	30.2	--
No Data	49.9	16.2	1.7	4.3	1.4	30.4	6.8	2.8	5.8	31.7	10.6
Group Total	48.5	11.2	0.6	1.3	0.8	31.7	3.1	1.2	3.9	31.3	5.7
Highest Degree completed											
Some high school	45	13.1	0.6	3.1	1.3	30.7	5	1.1	4.3	25.6	6.8
High School Graduate	48.9	13.1	0.8	2.9	1.1	29.2	6.4	3.1	5.1	32	12.4
Some college or Associate degree											
Baccalaureate degree or more	54.8	21.4	3.4	6.8	1.8	30.9	9.1	4.1	7.8	36.7	13.2
No data	28.1	21.4	--	--	--	24.3	--	--	--	8.7	--
Group Total	49.9	16.2	1.7	4.3	1.4	30.4	6.8	2.8	5.8	31.7	10.6
No. of persons employed	20.7	1.5	5.1	2.3	30.4	7.4	3.8	6.8	30.6	10.8	51.9
None	15.5	2	4.6	1.3	31.4	7.1	2.6	5.8	33	10.9	50.2
One or two	10.9	0.1	1	0.2	25.3	3.9	1.6	3.5	27	7.6	42.8
three or four	10.3	--	--	--	19.3	--	--	--	19.8	4.9	39.8
5 or more	16.3	1.7	4.3	1.4	30.4	6.8	2.8	5.8	31.7	10.5	49.8
Group Total	49.1	17.3	1.3	4.7	2.2	30.4	8	3.6	7	30.6	10.6
Household Income											
less than \$25,000	47.3	16.1	1.6	3.2	1.3	28.8	3.9	2.4	5.6	29.4	9.9
\$25,000 to \$49,000	54.1	14.9	1.4	4.4	1.2	34.7	7.6	3.3	5.6	34.2	11.7
\$50,000 to \$74,000	49	16.8	2.2	4.9	1.2	28.5	7.7	2.1	5.2	32.4	10.1
\$75,000 or more	49.8	16.3	1.7	4.3	1.4	30.4	6.8	2.8	5.8	31.7	10.5
Group Total	54.7	22.2	2.2	6.6	2	34.1	8.6	3.5	7.5	34.8	13.5
Household size											
one or two	50.1	11.9	2	2.3	0.9	29.2	6	2.6	4.9	32.8	9.2
three	45.3	11.5	1.3	3	0.9	26.6	5.1	1.3	4.9	28.5	5.4
four	42.1	9.1	0.3	2.1	1.2	28.2	4.5	3	4.4	27.4	10.5
five	38.8	10	0.2	0.9	0.4	22.3	4.2	1.4	1.3	25.2	7
six or more	49.8	16.3	1.7	4.3	1.4	30.4	6.8	2.8	5.8	31.7	10.5
Group Total	47.3	14.4	1.1	4.5	1.7	28.7	6.8	4.1	7.2	30.3	7.3
Poverty Status											
less than 100%	46.4	15.4	1.2	3	1.6	28.6	6.1	3.3	5.5	28.7	11
100 to 199%											

	Any Medical Service Row %	Acupuncture Row %	Ayurveda Row %	Biofeedback Row %	Chelation Row %	Chiropractic Row %	Reiki Row %	Curanderismo Row %	Hypnosis Row %	Massage Therapy Row %	Naturopathy Row %
200 to 399%	49.2	15	1.2	3.9	1.3	30.6	5.4	2.4	4.9	30	11.3
400 to 599%	49.6	16	2.2	4.3	1.1	30.4	7.2	2.2	6.4	33.7	9
600% or more	56.3	21	3	6.6	1.6	33.2	9.8	2.8	6.1	37	12.3
Group Total	49.8	16.3	1.7	4.3	1.4	30.4	6.8	2.8	5.8	31.7	10.5
Health insurance status	49.6	16.3	1.6	4.1	1.4	30.4	6.7	2.6	5.5	31.4	10.4
Has Health insurance	53.7	16.9	3.2	5.8	0.7	32.3	9.2	5	9.6	36.5	13.6
No Health insurance	39.3	16.2	1.3	19.6	20.9	25.1	1	1.3	1.3	26.5	2.3
DK/NS	40.3	5.4	3.6	5.9	3.1	23.5	4.3	2.1	7.6	30.2	4.7
REFUSED	49.8	16.3	1.7	4.3	1.4	30.4	6.8	2.8	5.8	31.7	10.5
Group Total	47.9	15.6	2.1	4.3	1.1	28.9	7.2	3.1	5.2	34.3	11.2
General health status	50.8	16.6	2.2	2.8	1.3	30.9	6.2	2.1	5.2	31.1	11.8
Excellent	47	14.4	1.1	4.5	1.6	28.8	6.2	2.4	5.9	28.7	7.7
Very Good	56	19.2	1.1	6.7	1.6	35.6	7.4	4	7.7	33.2	11.9
Good	60.4	25.6	1.2	9.1	2.4	35.3	13.1	6	8	44.7	16.8
Fair	14.6	12.6	2.1	4.1	--	9.1	6.5	--	--	11.2	6.5
Poor	49.3	15.2	3.6	3.2	0.8	31	11	2.4	3.4	29.8	11.4
DON'T KNOW	48.5	16.6	2.2	4.6	1.6	29.7	6.6	2.6	5.7	31.4	11.5
Body Mass Index	51.4	14.7	1.2	3.6	1.5	31.4	6.2	2.9	6.1	31.4	10.2
underweight	50	18.4	1	5.2	1	30.5	7.3	2.9	5.8	33.6	8.9
normal	62.1	26.1	2.4	8.6	1	41.9	10.5	4.7	6.5	41.2	12.7
over weight	47.9	14.7	1.6	3.6	1.5	28.7	6.2	2.5	5.7	30.3	10.2
obese	65.6	30	1.3	13.6	4	43.2	11.9	7	7.9	45.3	16.5
Has arthritis?	49.1	17	0.8	7.9	2.2	27	8.1	2.9	9.2	31.5	9.1
Yes	48.9	15.3	1.8	3.5	1.2	29.9	6.3	2.5	5.4	30.9	10.3
No	73.4	70.2	3.1	3.1	3.1	73.4	70.2	--	3.1	73.4	6.4
Limited activity: Climb stairs	68.2	28.6	0.9	14.9	5.6	45.6	14.3	5.9	6.1	41.8	14.5
Yes, limited a lot	55	24.5	0.8	7.7	1.4	32.7	7	4.3	10.1	35	10.1
Yes, limited a little	48.6	15.1	1.8	3.6	1.2	29.6	6.4	2.5	5.4	31.1	10.4
No, not limited at all	34.9	7.4	1.2	3.3	1.2	18.6	12.6	--	2.6	10.2	2
DK/NOT SURE	100	--	--	--	--	100	--	--	--	--	--
REFUSED	62.5	24.6	2.5	10	3	41	12.2	7.2	7.7	41.4	15.4
Accomplish less due to physical health	47.6	14.8	1.5	3.3	1.1	28.6	5.8	2	5.5	30.1	9.7
Yes	52.7	8.9	1.4	3.6	4.6	33.2	14.3	1.4	2.6	31.6	8.9
No	63.8	25.9	2.5	10	3	39.7	11.9	6.6	8.1	41.8	14.8
DK/NOT SURE	47.4	14.6	1.5	3.4	1.1	28.9	5.9	2	5.3	30	9.7
Accomplish less due to emotional health	69.3	33.8	2.4	--	5.4	29.9	28.3	27.1	24.7	46.2	41.4
Yes	59.3	19.6	2.1	7.4	1.5	38.5	8.9	5.2	9.4	39.2	10.9
No	49.1	16	1.7	4.1	1.4	29.8	6.6	2.5	5.5	31.2	10.5
DK/NOT SURE	23.3	6.3	4.6	6.5	6.7	16.1	4.6	6.3	6.5	17.1	11.3
Limited work due to emotional health	60.8	20.9	2.3	8.5	1.4	36.5	8.7	6.5	10.8	43.2	12.2
Yes	49	15.9	1.7	4	1.4	30	6.6	2.5	5.4	30.9	10.4
No	57.6	24.2	0.8	14.5	4.3	43.5	11.5	1.4	2.4	33.1	18
DK/NOT SURE											

	Any Medical Service Row %	Acupuncture Row %	Ayurveda Row %	Biofeedback Row %	Chelation Row %	Chiropractic Row %	Reiki Row %	Curanderismo Row %	Hypnosis Row %	Massage Therapy Row %	Naturopathy Row %
Pain interferes with normal work	44.8	13.5	1.6	3.1	1.2	26.5	5.8	2	5	27.5	8.6
Not at all	55.4	18.6	1.7	4.2	1.7	33.9	6.8	3.5	5.6	34.2	12.9
A little bit	61.3	21.4	2.1	10	1.4	42.3	10.3	3	12.1	45.2	17.5
Moderately	74	28.6	3	10.4	2.3	49.5	15.9	8.9	6.3	49.8	13.8
Quite a bit	78.3	42.4	2.4	13.3	2.7	52.1	11.8	8.7	10.1	66.6	22.7
Extremely	46.6	15	1.6	3.6	1.2	28	6	2.4	5.1	29.3	9.2
Felt peaceful and calm	54.8	18.7	1.9	5.7	1.6	33.7	8.3	3.5	5.7	36.9	13.9
All or most of the time	63.5	20.7	1.8	6.6	2.5	42.1	9.5	3.6	11.2	39.3	13
little or none	46.2	9.1	0.7	0.7	--	34.3	1.7	1	18.2	17.9	2.8
not sure, refused	46.6	14.8	1.7	3.3	1.1	28	6.3	2.4	4.8	30.1	9.4
Had lot of Energy	54.1	16.9	1.7	5.4	2	33.9	6.8	3.2	6.6	33.6	12.6
All or most of the time	62.2	27.4	1.4	9.1	2.2	38.9	11.8	4.6	10.7	39.3	13.3
little or none	43.4	11.2	--	8.4	--	30.6	0.7	0.4	8.4	33.2	0.4
not sure, refused	46.5	18.9	0.2	2.6	2.3	26.2	7.3	3.5	5.7	34.1	7.7
Felt down-hearted and blue	60.5	21.5	1.8	6	1.8	34.4	8	4.3	6.3	39	12
All or most of the time	48.1	15.4	1.7	4.1	1.2	30	6.6	2.5	5.6	30.5	10.4
little or none	83.7	3.7	--	--	29	19.2	--	4.7	31.2	49	4.8
not sure, refused	55.1	17.9	1.1	8.2	2.3	33.1	11.3	6.6	6.5	35.7	13
Problems interfere with social activities	66.1	22.7	2.8	6.4	2.4	39	11.5	6.2	8.5	45.1	14.8
All or most of the time	48.1	15.5	1.6	4	1.2	29.6	6.2	2.2	5.4	30.3	10.1
little or none	50	23.2	--	--	12.2	18.6	8.9	8.9	18.4	31.7	1.1
not sure, refused											

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