

Insurance Coverage and Subsequent Utilization of Complementary and Alternative Medicine Providers

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Background: Since 1996, Washington State law has required that private health insurance cover licensed complementary and alternative medicine (CAM) providers.

Objective: To evaluate how insured people used CAM providers and what role this played in healthcare utilization and expenditures.

Study Design: Cross-sectional analysis of insurance enrollees from western Washington in 2002.

Methods: Analysis of insurance demographic data, claims files, benefit information, diagnoses, CAM and conventional provider utilization, and healthcare expenditures for 3 large health insurance companies.

Results: Among more than 600 000 enrollees, 13.7% made CAM claims. This included 1.3% of enrollees with claims for acupuncture, 1.6% for naturopathy, 2.4% for massage, and 10.9% for chiropractic. Patients enrolled in preferred provider organizations and point-of-service products were notably more likely to use CAM than those with health maintenance organization coverage. The use of CAM was greater among women and among persons 31 to 50 years of age. The use of chiropractic was more frequent in less populous counties. The CAM provider visits usually focused on musculoskeletal complaints except for naturopathic physicians, who treated a broader array of problems. The median per-visit expenditures were \$39.00 for CAM care and \$74.40 for conventional outpatient care. The total expenditures per enrollee were \$2589, of which \$75 (2.9%) was spent on CAM.

Conclusions: The number of people using CAM insurance benefits was substantial; the effect on insurance expenditures was modest. Because the long-term trajectory of CAM cost under third-party payment is unknown, utilization of these services should be followed.

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therapists.¹ The number of CAM providers is projected to double during the next decade² because of increased consumer demand for these services.³ Clinical trials have documented the efficacy of CAM provider treatments for several medical problems such as back pain,⁴ osteoarthritis,⁵ and nausea and vomiting associated with chemotherapy.⁶ Other studies are in progress.

As the number of CAM providers and the visibility of CAM services increase, the pressure on third-party payers to cover these services grows. Wolsko et al⁷ report that many insurance products already cover chiropractic in some form. A Kaiser Family Foundation employer survey in 2004 found that 87% of covered employees had chiropractic coverage, and 47% had acupuncture coverage.⁸ *The Landmark Report II on HMOs and Alternative Care* reported that 67% of health maintenance organizations (HMOs) offer some type of alternative care.⁹ To our knowledge, no studies to date have reported figures for population-based utilization and the financial consequences to third-party payers of broadly covering CAM providers in their insurance products.

The state of Washington provides an important laboratory to assess the magnitude of economic risk when a third-party payer covers CAM providers. In 1996, Washington State implemented a law mandating that all commercial health insurance companies cover the services provided by every category of licensed provider.¹⁰ This law was passed in the context of a legislative environment already friendly to CAM providers

During the last decade, the health professionals collectively known as complementary and alternative medicine (CAM) providers have been recognized as mainstream sources of healthcare. Regulation by government agencies and validation of some CAM therapies by scientific studies have increased the credibility of CAM professionals. All 50 states now license chiropractors, and about 85% of states license some of the other CAM providers such as naturopathic physicians, acupuncturists, and massage

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because mandatory inclusion of a chiropractic benefit had been required since 1983.¹¹

This study calculates CAM utilization and expenditures for insurance companies that underwrite western Washington State health insurance. Insurance benefit structures, CAM provider use, and spending for services are described for more than 600 000 private insurance enrollees in 2002.

METHODS

Population and Sample

This study was approved by the University of Washington Human Subjects Review Board in 2001. Three large insurance companies participated in this study. Company selection was based on willingness to participate, data retrieval capacity, and market penetration in western Washington State. Data for calendar year 2002 were included for all individuals 18 to 64 years of age who were continuously enrolled for 12 months in a single private health insurance plan covered by Washington's law mandating that all commercial health insurance companies cover the services provided by every category of licensed provider. Self-insured employer plans were excluded. All insurance products that we studied provided comprehensive medical coverage. Insurance products were categorized as HMO, point of service (POS), or preferred provider organization (PPO). Unknown product type and traditional or indemnity coverage accounted for fewer than 4.25% of enrollees, who were excluded from the study.

Databases and Measures

Analysis files were created for each company. Company A provided an assembled analysis file that lacked expenditure information, whereas companies B and C provided separate files with data on enrollment, medical claims, utilization, and expenditures. The CAM utilization data for company A were available only for their HMO product line, excluding approximately one third of their customers in POS products.

Enrollment data included unique encrypted enrollee identification codes, birth year, sex, residence ZIP code, product type, employer contract number, Employee Retirement Income Security Act status, and months of active enrollment. Medical claims contained the unique encrypted enrollee identification codes, claim number, service date, service location, *International Classification of Diseases* codes,¹² *Current Procedural Terminology* codes,¹³ and Healthcare Common Procedure Coding System codes.¹⁴ We also received data on line-item charges and provider type (including specific codes for acupuncture, naturopathy,

massage, and chiropractic). In any given year, an enrollee's health plan was defined as the product type in December of the analysis year. In the tables and figures of this article, the designation of "enrollee" reflects the total population of covered individuals in the study sample, and "claimant" refers only to the persons who used any allowed service. From our enrollment data, we generated variables for age and county of residence. In the medical claims data, a visit was defined as 1 encounter to a specific provider per day. Duplicate visits were excluded from the analysis database.

Provider types were divided into the following 3 categories: (1) CAM providers were defined as chiropractors, massage therapists, acupuncturists, and naturopathic physicians; (2) conventional providers were defined as physicians (including osteopaths and specialists), physical therapists, advanced registered nurse practitioners, and physician assistants; and (3) providers who did not fit into either of these categories, including occupational therapists and psychologists, were put into a third category called *other* as previously described.¹⁵ In some analyses, naturopathic physicians, acupuncturists, and licensed massage therapists were combined and referred to as "NAM" providers because, unlike chiropractors, they were not reimbursed by insurance before 1997 but were covered in some form thereafter. Location of service was categorized as inpatient, outpatient clinic or provider office, and outpatient other (eg, emergency department, drug treatment facility, and kidney dialysis center). Pharmacy files were supplied by companies B and C. The pharmacy files included data on the number of prescriptions filled and aggregated annual expenditures for each enrollee's prescription drugs.

For companies B and C, several expenditure variables were available for each visit. The amount allowed by the insurance company was chosen as the closest proxy for expense. Inpatient hospital expenditures, all outpatient services, and pharmacy expenditures were included in the calculation of per capita outlays.

The Johns Hopkins Adjusted Clinical Groupings software, version 6,¹⁶ was used for risk adjustment to counter selection bias among the individuals who chose to use CAM providers. Using this software, we constructed 2 indices of the types of diseases or disorders present and the expected resource utilization for each patient. The indices are (1) expanded diagnosis clusters, which categorize *International Classification of Diseases, Ninth Revision, Clinical Modification* codes into 26 major disease categories for each individual and (2) resource utilization bands (RUBs), which measure an individual's expected resource use and are created by grouping adjusted

clinical grouping codes for individuals with similar levels of expected resource use. Lower RUBs include individuals with less expected resource use, and higher RUBs include those with greater expected resource use.

Predictors of CAM use were modeled using logistic regression analysis. Predictors included in the model were age group, sex, insurance product type, county population, disease types present (using indicators for the 26 expanded diagnosis cluster categories), and indicators for expected resource use (using indicators for the 5 RUB categories). These predictors were then entered in a linear regression model. This model included more than 500 000 observations; therefore, using linear regression analysis provides valid estimates even though the outcome variable is dichotomous.¹⁷

National Health Interview Survey (NHIS)¹⁸ data from the 2002 supplemental survey on CAM use was used to provide a US comparison with our western Washington State experience. To approximate the selection criteria used for our local data, adults (aged 18-64 years) with private insurance were selected from the NHIS sample, and then 3 of the NHIS databases (samadult, personsx, and althealt) were linked together for our analysis. As with the analysis of Washington State data, US CAM utilization was defined as the use of a chiropractor, massage therapist, acupuncturist, or naturopathic physician in the last 12 months.

RESULTS

CAM Benefit Structures

Since 1983, all private health insurance companies in Washington State were required to have a chiropractic benefit.¹¹ The law mandating that all commercial health insurance companies cover the services provided by every category of licensed provider was implemented in 1996 and required that private health insurance companies include access to all categories of licensed providers in private insurance products.¹⁰ In 2000, the ability to self-refer for chiropractic care was also mandated.¹⁹ The history of these benefits has been extensively described.²⁰ Company A created a list of medical conditions for which the scientific data provided strongest support for CAM use, including chronic pain syndromes for acupuncture, back pain for massage, and selected medical conditions for naturopathy. Enrollees were required to obtain a referral from a primary care physician (except chiropractic, for which enrollees could self-refer for the first 10 visits), and some visit limits were established by type of service. Visit limits could be increased based on the primary

care provider's recommendation. Massage for fibromyalgia was originally included but was excluded in 1998. By 2002, companies B and C had extended the CAM benefit to all product lines, using cost sharing similar to that of conventional medical services. Massage was treated like a rehabilitation benefit, with visit limits and primary care provider referral requirements.

Population and Sample

The 3 companies that participated covered approximately 75% of western Washington State's private insurance market. More than 600 000 enrollees met the study inclusion criteria. **Table 1** summarizes the characteristics of the study population and the prevalence of CAM claims. Subjects were 53.3% female, 57.0% were older than 40 years, and 73.1% lived in counties with a population greater than 400 000. Health maintenance organization coverage was the most common (41.1%), followed by PPO coverage (38.5%), and POS coverage (20.4%). The study population was composed of 24.9% low utilizers (RUBs 0-1) and 12.0% high utilizers (RUBs 4-5). The percentage of enrollees with claims was 83.4%. Overall, 13.7% of enrollees made CAM claims as follows: 1.3% of enrollees had claims for acupuncture, 1.6% for naturopathy, 2.4% for massage, and 10.9% for chiropractic. United States survey data from privately insured people in 2002 showed that 1.2% used acupuncture, 0.3% used naturopathy, 6.5% used massage, and 8.4% used chiropractic.¹⁸ As in Washington State, US CAM use was greater for enrollees in PPO (16.3%) and POS (16.8%) products than in HMOs (10.9%).

Prevalence and Predictors of CAM Provider Use

Table 2 summarizes the predictors of CAM use. Significant predictors included female sex and age 31 to 50 years. Enrollees in insurance products that offered greater consumer choice (eg, PPO and POS products vs HMOs) showed greater utilization of CAM. The single greatest predictor of CAM use was expected resource consumption based on the RUB index. Persons in RUB 4 or 5 (expected high utilizers of medical care) were more than 11 times more likely to use CAM than persons in RUB 1. The use of CAM was lowest in urban areas because of lower rates of chiropractic use in urban counties than in rural counties.

CAM Utilization and Total Medical Expenditures

Table 3 gives the visit-level utilization of CAM and conventional services for companies A, B, and C. Expenditure data were available for companies B and C only. Chiropractic, naturopathy, acupuncture, and massage (CAM) accounted for 17.6% of outpatient

Table 1. Population Demographics and Complementary and Alternative Medicine (CAM) Provider Claims

Demographic	All Enrollees, No.	% of Total Population	Enrollees With Claims by Provider Type, %						
			Any Claim	CAM*	NAM [†]	Chiropractor	Acupuncturist	Naturopathic Physician	Massage Therapist
All enrollees	605 368	100.0	83.4	13.7	4.6	10.9	1.3	1.6	2.4
Sex									
Male	282 969	46.7	75.8	10.8	2.4	9.4	0.8	0.7	1.2
Female	322 399	53.3	90.1	16.2	6.6	12.3	1.8	2.4	3.5
Age, y									
18-40	260 516	43.0	79.7	12.4	4.2	9.9	1.0	1.5	2.4
41-64	344 852	57.0	86.2	14.6	5.0	11.7	1.6	1.7	2.5
County population, in 1000s									
< 100	46 538	7.7	83.9	17.4	4.2	15.2	1.2	0.9	2.7
100-400	116 427	19.2	84.4	16.4	4.5	14.1	1.2	1.3	2.6
> 400	442 403	73.1	83.1	12.6	4.7	9.7	1.4	1.8	2.4
Insurance product									
Health maintenance organization	249 036	41.1	84.7	9.5	2.5	7.8	0.9	0.8	1.1
Point of service	123 428	20.4	79.9	13.4	5.1	10.1	1.1	2.4	2.6
Preferred provider organization	232 904	38.5	83.9	18.3	6.7	14.7	1.9	2.1	3.8
Resource utilization band[‡]									
0 (No claims)	100 505	16.6	—	—	—	—	—	—	—
1	50 228	8.3	100.0	1.3	0.7	0.6	0.1	0.3	0.3
2	115 371	19.1	100.0	9.9	1.9	8.5	0.5	0.7	0.8
3	265 455	43.9	100.0	18.5	6.3	14.6	1.7	2.2	3.3
4	58 906	9.7	100.0	29.1	11.9	23.0	3.6	3.9	6.9
5	13 884	2.3	100.0	33.3	12.8	27.4	4.8	4.2	6.8

*Chiropractors, naturopathic physicians, acupuncturists, and massage therapists.

[†]Naturopathic physicians, acupuncturists, and massage therapists.

[‡]From diagnostic information contained in the claims data (excludes 1019 claimants whose diagnostic information was insufficient to create a resource utilization band). All other values in the "All Enrollees" column reflect data received in the enrollment file.

provider visits and 2.9% of the total medical expenditures. The CAM expenditures were dwarfed by the high cost of conventional care. The median per-visit expenditures were \$39.00 for CAM care and \$74.40 for conventional outpatient care. Inpatient hospital expenditures were 21.6% and prescription drugs were 23.1% of the total medical expenditures. The 12% of the insured population in RUBs 4 and 5 were responsible for 33.5% of CAM, 41.0% of outpatient conventional, and 49.7% of total expenditures.

Medical Problems Treated by CAM Providers

Table 4 lists provider diagnoses for companies B and C. Musculoskeletal pain was the most common diagno-

sis from a CAM visit, accounting for 99.3% of visits to chiropractors, 92.7% of visits to massage therapists, 72.7% of visits to acupuncturists, and 30.7% of visits to naturopathic physicians. Musculoskeletal pain was also the top diagnosis for conventional providers, representing 21.0% of visits. Female reproductive diagnoses were the next most frequent reasons for naturopathic physician visits, accounting for 18.2% of all visits, almost half of which (3512 visits) were for menopause treatment. Neurologic problems such as headache accounted for 17.9% of visits to acupuncturists, 13.2% of visits to naturopathic physicians, 8.7% of visits to massage therapists, 6.2% of chiropractic visits, and 5.2% of visits to conventional providers.

CONCLUSIONS

Our study addresses important questions about CAM use by people with private insurance who have a CAM benefit. Our cohort had fewer people with claims for massage, a similar proportion with claims for acupuncture, and a greater proportion with claims for naturopathy and chiropractic than was seen among privately insured adults who took part in the 2002 NHIS.¹⁸ We believe that the requirement for a provider referral reduced the claims for massage in our population. A survey of our cohort like the NHIS would undoubtedly reveal additional use outside of insurance billing. Our study also shows that a small proportion of the population uses acupuncture, even when it is covered by insurance, and that chiropractic is the most commonly used form of CAM among the privately insured in the United States and in Washington State, with 8.3% and 10.9% use, respectively. The 5 times greater prevalence in the use of naturopathy among our insured cohort compared with national surveys is likely a regional phenomenon. Western Washington's 422 actively licensed naturopathic physicians (written communication, Roland Wilbur, Washington State Department of Health, Information Services, February 2003) represent approximately 31% of all naturopathic physicians licensed nationally.¹ Even with these differences noted, the prevalence of CAM use among our claims data is similar to that among the NHIS data (13.7% vs 13.4%).¹⁸ Although we do not know why this is true, it suggests that insurance coverage of licensed CAM providers does not lead to runaway utilization.

As shown in previous population-based surveys,^{7,21} we found that CAM use is greater among certain groups than among others. The insured proportions that fall into these different categories will be a factor determining the prevalence of CAM use. For example, patients who have high expected resource utilization based on risk-adjustment schemes use more CAM than people who use less healthcare. Other investigations using provider visits as a measure of utilization have had similar results.²² Although women were only slightly more likely to use chiropractic than men, they were more than twice as likely to use naturopathy, massage, and acupuncture. The treatment of specific medical condi-

Table 2. Predictors of Complementary and Alternative Medicine Provider Use

Predictor	Odds Ratio (95% Confidence Interval)	SE
Female sex	1.23 (1.21-1.26)	0.01
Age, y		
18-30	1.00	—
31-40	1.38 (1.34-1.41)	0.02
41-50	1.23 (1.19-1.26)	0.02
51-64	0.98 (0.95-1.01)*	0.02
County population, in 1000s		
< 100	1.00	—
100-400	1.06 (1.03-1.10)	0.02
> 400	0.69 (0.67-0.71)	0.01
Insurance product		
Health maintenance organization	1.00	—
Point of service	1.69 (1.65-1.74)	0.02
Preferred provider organization	2.35 (2.30-2.40)	0.02
Resource utilization band		
1	1.00	—
2	5.27 (4.85-5.73)	0.22
3	7.48 (6.89-8.12)	0.31
4	11.49 (10.54-12.52)	0.50
5	14.35 (13.05-15.78)	0.70

* $P = .16$. $P \leq .001$ for all others. All values are adjusted for expanded diagnosis cluster category and insurance company.
SE indicates the standard error of the estimated odds ratio.

tions such as menopause account for some of these gender-specific differences. Chiropractic use was substantially more common in smaller counties than in major urban centers. This affirms the important role that chiropractors have historically played in rural primary care, where access to conventional providers is more limited.²³ Some benefit structures are probably more CAM-friendly than others; requiring a gatekeeper's recommendation as opposed to self-referral may be the biggest disincentive to insurance-financed CAM use. In addition, people will likely self-select into different products based on their expected need for medical services. For this reason, we were not surprised that CAM use was greater in PPOs than it was in HMO product lines.

We did not expect to find that CAM care would account for such a small proportion of insurance expenditures. The data from the 1997 survey by Eisenberg et al²⁴ estimated that CAM professional expenditures were between \$21.2 billion and \$32.7 billion, or about 1.9% to 3.0% of the total 1997 healthcare expenditures. Our estimate that CAM providers accounted for 2.9% of

Table 3. Complementary and Alternative Medicine (CAM) and Conventional Outpatient Provider Visits and Expenditure Data per Enrollee in 2002*

Variable	Value
Outpatient provider visits and expenditures per enrollee	
Acupuncture	
Visits	52 542 (1.3)
Visits per user, median	6.52
Expenditures per enrollee, \$	6 (0.2)
Naturopathy	
Visits	41 106 (1.0)
Visits per user, median	4.25
Expenditures per enrollee, \$	9 (0.3)
Massage	
Visits	116 453 (3.0)
Visits per user, median	7.88
Expenditures per enrollee, \$	18 (0.7)
NAM [†]	
Visits	210 101 (5.3)
Visits per user, median	7.52
Expenditures per enrollee, \$	33 (1.3)
Chiropractic	
Visits	481 553 (12.2)
Visits per user, median	7.27
Expenditures per enrollee, \$	41 (1.6)
CAM [‡]	
Visits	691 654 (17.6)
Visits per user, median	8.35
Expenditures per enrollee, \$	75 (2.9)
Conventional provider	
Visits	3 246 793 (82.4)
Visits per user, median	6.77
Expenditures per enrollee, \$	686 (26.5)
Additional expenditure data	
Outpatient other	671 (25.9)
Inpatient expenditures per enrollee	560 (21.6)
Prescription drug expenditures per enrollee, \$	598 (23.1)
Total expenditures per enrollee, \$	2589 (100.0)

*Data are given as number (percentage) of total expenditures unless otherwise indicated. Expenditures are based on companies B and C only.

[†]Naturopathic physicians, acupuncturists, and massage therapists.

[‡]Chiropractors, naturopathic physicians, acupuncturists, and massage therapists.

the 2002 private insurance expenditures is similar to these earlier national survey data. Payers have resisted covering CAM providers in part because of a fear that coverage would result in large, steadily increasing, and unpredictable expenditures for CAM services, not unlike the history of prescription drug coverage. Our study performed 6 years after the mandated inclusion of CAM benefits in Washington State suggests that this is not going to be the case. We hypothesize several reasons.

First, because the typical CAM patient's emphasis is on the treatment of musculoskeletal pain, the scopes of practice for many CAM providers overlap. This suggests that other CAM services such as massage and acupuncture may compete with the previously covered CAM service of chiropractic care. Second, although naturopathic physicians, and to a lesser extent acupuncturists, have broader scopes of practice, these services are used by a small fraction of the population. Third, CAM providers in our study practice a less expensive form of medicine. They provide virtually no inpatient services, and they rarely use expensive diagnostic tools such as imaging technology.²⁵

Our study has several limitations. First, we measured utilization and expenditure, not efficacy and value. Although we found that CAM's proportion of the insurance dollar is small, 2.9% of more than \$1 billion is still a great deal of money. Randomized controlled investigations performed for specific CAM interventions show that CAM (like conventional care) is not effective for all of the conditions it is used to treat (eg, acupuncture for fibromyalgia²⁶). Even so, many patients commonly integrate CAM and conventional care,^{27,28} and the extent to which this should be encouraged is unclear. Second, the value to the healthcare consumer of integrating CAM services into health insurance benefits is still debated in Washington State. The movement toward forms of consumer-directed healthcare will test the consumer's commitment to CAM services. In theory, the economical nature of CAM interventions may be attractive to patients with high-deductible insurance policies and private medical savings accounts. Studies on CAM cost sharing, cost-effectiveness, and medical quality are warranted. Third, although the samples for this study are large, the population and benefits are always select. The exclusion of Medicaid and Medicare recipients, the uninsured, and self-insured companies means that our data may be incomparable to some large population-based national surveys. Although we believe that our 4 provider categories capture almost all professional CAM services (96.5% based on NHIS population-based use estimates), at least 11 additional provider groups have been included in national surveys.²¹

Table 4. Diagnoses Assigned by Conventional or Complementary and Alternative Medicine Providers*

Expanded Diagnosis Cluster Category	Conventional Provider (n = 2 733 912)	Acupuncturist (n = 41 655)	Massage Practitioner (n = 120 111)	Naturopathic Physician (n = 40 847)	Chiropractor (n = 435 781)
Musculoskeletal	21.0	72.7	92.7	30.7	99.3
Administrative, general examination	15.1	—	—	7.4	—
Cardiovascular	9.0	0.9	—	8.1	—
Female reproductive	8.6	4.3	—	18.2	—
General surgery [†]	8.2	2.4	—	4.9	—
Skin	7.5	1.0	—	9.6	—
Respiratory	6.5	2.2	—	6.2	—
Allergy	5.3	2.2	—	9.5	—
Neurologic (eg, headache)	5.2	17.9	8.7	13.2	6.2
Psychosocial	4.8	2.0	0.5	4.7	—
Ear, nose, and throat (eg, otitis media, chronic pharyngitis)	4.4	1.9	—	6.0	—
Endocrine	4.4	0.5	—	11.2	—
Gastrointestinal or hepatic	4.2	2.1	—	12.2	—
General signs and symptoms	3.7	3.4	0.8	9.8	—
Malignancy	3.5	—	—	1.2	—
Genitourinary	2.8	—	—	2.4	—
Eye	2.6	—	—	0.6	—
Hematologic	1.1	—	—	3.9	—
Infections	0.6	—	—	2.5	—
Visits that included an unassigned diagnosis	9.6	4.2	3.6	14.7	7.6

*Data are given as percentage of visits to that provider type with that diagnosis (limited to diagnoses that account for at least 2% of visits to any provider type [diagnoses are not mutually exclusive and do not sum to 100%]), excluding company A and including all visits (inpatient, outpatient clinic or provider office, outpatient other, and allowed and not allowed) at which a provider assigned a diagnosis. The n values represent the number of visits to that provider type. These differ from the visit values in Table 3, in which the data are restricted to allowed outpatient clinic or provider office visits and are based on the experience of all 3 companies. Dashes indicate categories representing less than 0.5% of visits.

[†]Conditions that often lead to a surgical procedure performed by a conventional provider and not elsewhere classifiable (eg, hemorrhoids, appendicitis, and hernia).

Our study is of national significance as insurance companies in the United States respond to consumer demand for an integrated CAM benefit.³ The Washington State law mandating CAM provider coverage in private commercial insurance products creates a window through which consumer behavior under various CAM and conventional benefit structures can be monitored and the effect on healthcare expenditures measured. Despite the increase in CAM provider use and a mandatory requirement in Washington State to include CAM providers in insurance, the overall percentage of insurance expenditures for CAM remains small 6 years after passage of the requirement. At this time, CAM coverage minimally contributes to increasing healthcare expenditures and health insurance premiums in Washington State. Future studies should evaluate the trajectory of CAM expenditures and the role of CAM in the health-

care marketplace, especially whether CAM therapies actually substitute for more expensive conventional care. Only then can the total impact of CAM integration on healthcare utilization be measured.

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