

**STUDY OF
PROPOSED MANDATORY HEALTH INSURANCE
FOR CHIROPRACTIC SERVICES**

**Conducted by the
Office of the Legislative Auditor
and
Peat Marwick Main & Co.
Certified Public Accountants**

A Report to the Governor and the Legislature of the State of Hawaii

**Submitted by the
Legislative Auditor of the State of Hawaii
Honolulu, Hawaii**

**Report No. 88-9
January 1988**

FOREWORD

In 1987, the Legislature enacted Act 331 which requires the Legislative Auditor to assess the social and financial impact of measures proposing to mandate health insurance benefits. The purpose of the assessment is to provide the Legislature with a rational and objective basis for evaluating proposals that require health insurance coverage for particular health services.

This report assesses the social and financial impact of Senate Bill No. 1173, H.D. 1, and House Bill No. 343, H.D. 1 (1987 Regular Session) which propose to mandate health insurance coverage for chiropractic services. We were assisted in the preparation of this report by the certified public accounting firm of Peat Marwick Main & Co. which assessed the financial impact of the proposed measure.

We wish to express our appreciation for the cooperation and assistance extended to us by the staff of various state agencies, private insurers, and other interested organizations we contacted in the course of doing the assessment.

Clinton T. Tanimura
Legislative Auditor
State of Hawaii

January 1988

TABLE OF CONTENTS

<i>Chapter</i>		<i>Page</i>
1	INTRODUCTION AND BACKGROUND.....	1
	Background on Health Insurance.....	1
2	MANDATED HEALTH INSURANCE BENEFITS IN THE HAWAII CONTEXT	9
	Mandated Health Insurance Benefits	9
	Health Insurance in Hawaii	12
	Assessment of Proposals for Mandated Health Insurance Benefits	16
3	BACKGROUND ON CHIROPRACTIC SERVICES	19
	Background on Chiropractic	19
	The Chiropractic vs. Medical Conflict	20
	Mandated Coverage in Other States	22
	Proposed Legislation.....	23
4	SOCIAL AND FINANCIAL IMPACT OF INSURANCE COVERAGE FOR CHIROPRACTIC SERVICES	25
	Summary of Findings	25
	The Social Impact	26
	Financial Impact	34
	Analysis of the Proposed Legislation	48
	Conclusion	48
	NOTES.....	51

LIST OF TABLES

<i>Table</i>		<i>Page</i>
4.1	Average Charges by Provider Type.....	36
4.2	Estimated Additional Cost for Coverage of Chiropractic Under Three Senarios	46

Chapter 1

INTRODUCTION AND BACKGROUND

Act 331, SLH 1987, states that the Legislature shall request the Legislative Auditor to assess the social and financial impact of measures proposing to mandate health insurance benefits. The purpose of the assessment is to provide the Legislature with an independent, systematic review of the ramifications of these proposals so that it can determine whether the proposed coverage would be in the public interest.

This report assesses the social and financial impact of Senate Bill No. 1173, H.D. 1, and House Bill No. 343, H.D. 1 (1987 Regular Session) which proposes to mandate health insurance coverage for chiropractic services. The report consists of four chapters. Chapter 1 provides background information on health insurance and some current trends and issues. Chapter 2 discusses mandated health insurance, the context in which it would operate in Hawaii, and the framework for our assessment. Chapter 3 contains background information on the proposed mandated health insurance benefit, and Chapter 4 presents our assessment of the proposed measure.

Background on Health Insurance

Health insurance serves economic, medical, and social purposes. Health insurance, as we know it today, became popular during the Depression when hospitals developed Blue Cross plans to help finance their operations and to help subscribers meet the cost of hospital care. This was followed by the Blue Shield

plans which provided insurance coverage for physician services. Soon, commercial insurers also began to offer health insurance plans.

With the support of the federal government, insurance began to evolve into a financing measure to increase access to health care. During World War II, the federal government encouraged its growth by excluding employers' contributions to health insurance from wage controls and taxable income. More direct federal involvement began with the Medicare program which provides insurance for the elderly and the Medicaid program which provides payments for medical care for eligible needy and low income patients.

Today, health insurance not only finances and supports access to health care, it is used as an instrument of social policy.

In looking at state policy on health insurance, the New York State Council on Health Care Financing recently noted,

"Health insurance is not simply insurance in the conventional sense. It is fundamentally different from other types of insurance because it forms the base for allocating an essential social good and because its existence has a profound effect on the availability, costs, and use of medical services. Health insurance today is a form of social budgeting and State policy must recognize it as such in order to better guide the medical care system and to ensure an equitable health insurance system."¹

Private health insurance. A recent analysis of data from the 1977 National Medical Care Expenditure Survey (NMCES) found that private insurance plays a central role in financing health care in the United States, affecting both the magnitude and distribution of personal health care expenditures. Roughly four out of five Americans had some form of private coverage, with employers paying for most of the cost of coverage.²

The NMCES found that health insurance coverage varied according to whether it was group or nongroup insurance. Group insurance was generally work related

health insurance. Group members had more comprehensive coverage than those with nongroup insurance with the comprehensiveness of coverage increasing with the size of the group. Most of those receiving benefits through their employers had little choice about the benefits they received.

Those with nongroup coverage were generally the privately insured poor, the elderly, young adults, nonwhites, and female heads of households. Generally, those least able to pay for health care also had the least insurance because their lack of employment meant less income and also lack of group health insurance.

Forms of private health insurance. Private health insurance falls into three main categories: (1) the Blue Cross and Blue Shield Plans, (2) the commercial insurance companies, and (3) the independent plans such as health maintenance organizations (HMOs), self-insured plans, preferred provider organizations, and other variants of these plans.

The Blue Cross and Blue Shield are the largest and oldest private health insurers. They are the traditional fee for service plans where reimbursements are made for services provided by participating physicians and hospitals.

The commercial carriers are insurance companies such as Aetna Life, Travelers, and Prudential. Like the Blue Cross plans, they provide reimbursements for medical services.

HMOs are a more recent development. They furnish a benefit package of maintenance and treatment services for a fixed periodic fee. Their emphasis is on preventive health care.

Independent plans are the fastest growing category of health insurance, particularly self-insurance plans which have more than doubled in the past five years. Self-insurance, or more correctly noninsurance, refers to the assumption by

an employer, union, or other group of all or most of the risk of claims for a policy year. Employee claims are paid directly from an employer's bank account or a trust established for that purpose.³

Self-insurance has several advantages. It is exempt from state regulation under the federal Employee Retirement Income Security Act of 1974 (ERISA). Hence, state laws mandating coverage of specific facilities, practitioners, or therapy do not apply to these plans. Self-funded plans are also able to avoid most premium taxes. In addition, they give employers access to the claim reserves for business uses and provide tax-free interest on reserves. However, self-insurance plans are feasible primarily for employers with enough employees to create a sufficiently large risk pool.

Today, there are other variations. Many insurers provide administrative services only for self-insured employer plans without bearing any of the risk. Insurers also contract with employers for plans which are split into self-funded and insured portions, with the insurer providing partial protection that is comparable to that of a traditional insurance plan or for catastrophic levels of claims.

Another significant change is the growth in "cafeteria" plans which offer employees choices among health insurance coverages and other employee benefits, such as additional vacation days or wages.

Increasing cost of health care. The greatest concern in recent years has been the increasing cost of health care. The most significant impact has been on government expenditures for health care. The federal government, through Medicare, Medicaid, and other programs, pays for more than half of all third party reimbursements.

The amount paid by employers for health insurance has also risen sharply. In recent years, health insurance premiums have increased an average of 20 percent annually. Health benefits are now the third largest cost element after raw materials and straight time pay for most manufacturers. A recent study found that corporate expenses for health care were rising at such a rate that if unchecked, they would eliminate in eight years all profits for the average "Fortune 500" company and the largest 250 nonindustrials.⁴

Health care costs are of even greater concern for small businesses which have lower and more variable profits, high turnover in employees, and more part-time, seasonal, or young workers. Their insurance is more costly, and they get less for their dollar. Data indicate that their premiums are 10 to 15 percent higher than those of large firms.⁵

Small businesses are also subject to all mandated health insurance laws since they are not in a position to self-insure. Many small businesses also suffer a tax disadvantage. Business owners who are unincorporated or individuals who have more than 5 percent ownership of a Chapter S corporation cannot take a tax deduction for their own health insurance premiums as can incorporated owners.

Current concerns. The two dominant and closely linked issues in health care today are the need to ensure access to adequate health care for the uninsured and the underinsured and the need to contain the costs of health care.

The first issue is based on social considerations such as the obligation of a just society to finance health care fairly for all its members without regard to income, race, sex, race, or individual circumstances. These social considerations underlie federal initiatives for national health insurance, catastrophic insurance, and recent

actions in many states to create statewide insurance pools and state sponsored and state subsidized health care plans.

The second issue focuses on cost containment. Much of the blame for the crisis in health costs is attributed to the prevalence and comprehensiveness of health insurance, the perverse incentives it creates, and the complex public and private third party payments system predominant today.

There is extensive evidence that insurance encourages unnecessarily high levels of utilization and expenditures. Medical economists estimate that as many as 70 percent of physician/patient contacts are for common colds, upset stomachs, and other routine ailments that do not require professional care.⁶

Health insurance allows individuals to choose their own health care but insulates them from paying for all of the cost of such care. Prior to World War II, most patients paid for their own medical care. Today, the financial responsibility for medical care has shifted from patients to third party insurers. Most of the cost of health care is paid by reimbursements made by private insurance and government.

Most of the insured have more benefits than they need. The NMECS found that the average family paid out more in premiums than was returned in benefits. It found that the current system tends to lock different groups who face predictably different risks into buying the same insurance at the same premium. As a result, better risks have more insurance than the costs and benefits warrant. However, they have every incentive to make use of the benefits since they have no reason to forego services they might want and which their insurance will finance.

Until recently, no checks were placed on services furnished by providers. The open ended fee for service reimbursement system created incentives for providers to perform more services than were necessary. Reports of unnecessary surgery and expensive tests have been commonplace.

Changes sought. There is concern that medical costs are increasing so rapidly that they endanger access to health care and conflict with other pressing social and economic priorities. The policy problem is to control medical expenditures without sacrificing adequate medical care and insurance protection.

Some current approaches are to encourage competition in the health care marketplace to limit or to provide more flexible coverage, to promote a prudent buyer approach on the part of consumers, and to place providers under more careful scrutiny and control. This has led to changes in the forms of insurance, in the kinds of benefits offered, and in the reimbursement system.

New insurance plans try to restructure benefits to neutralize the financial incentives which encourage overinsurance and to make consumers better aware of the insurance they are buying. The focus is on promoting more efficient and cost-conscious behavior on the part of patients and providers.

Employers are increasing employee payments through deductibles (the amount patients must pay before benefits begin) and copayments (the portion of the expense of a covered service for which patients are responsible). Some companies have found that they can save almost 50 percent of the cost of insurance when they increase deductibles and coinsurance provisions.⁷

Employers are also using approaches such as offering multiple choice plans which allow employees to choose among various benefit packages; allowing employees to allocate the employer's benefit contributions among health care, vacation, or deferred compensation; or providing incentive programs where employees will receive deferred compensation if they spend less on health care.

Finally, the federal government is creating incentives for providers to keep costs down by changing its reimbursement system to a prospective payment system

that pays a fixed fee based on the patient's diagnosed illness regardless of the actual cost of care. Emphasis is also being placed on peer review and utilization review to ensure that only appropriate medical services are being provided.

Chapter 2

MANDATED HEALTH INSURANCE BENEFITS IN THE HAWAII CONTEXT

There has been a significant increase in the number and variety of mandated health insurance benefit laws across the nation. Hawaii already has some health insurance mandates, such as requiring reimbursement for dentists who perform oral surgery, for psychologists performing within their lawful scope of practice, and, most recently, for *in vitro* fertilization. However, individual mandates requiring insurers to cover specific health services are relatively new to the State. This chapter discusses mandated health insurance benefits and the Hawaii context in which a mandate would operate.

Mandated Health Insurance Benefits

Beginning in the 1960s, various states began to mandate additional health insurance benefits, such as coverage for alcohol and drug abuse treatment, maternity care, and catastrophic care.⁸ Mandated benefit laws were used to expand coverage to health professionals who had previously been excluded from reimbursement, such as psychologists, and to fill gaps in insurance coverage due to changing demands and improvements in medical technology.

There has been a significant increase in the number and variety of mandates. In 1974, there were 48 state mandated benefit laws. By 1987, there were more than 680 with an equal number reported to be pending at state legislatures.⁹ These laws take two approaches, either mandating that the benefit must be *included* in all policies issued by insurers, or mandating that it must be *offered* to anyone requesting such coverage.

The legal challenge to the right of the states to mandate health insurance benefits was resolved in June 1985 when the U. S. Supreme Court ruled in *Metropolitan Life Insurance Company v. Commonwealth of Massachusetts* that a Massachusetts law requiring insurers to provide minimum mental health care coverage was a valid and unexceptional use of the Commonwealth's police power. The court held that mandated insurance benefit laws are insurance laws that fall within states' regulatory authority and are not preempted by the Employees Retirement Income Security Act of 1974 (ERISA). However, the court exempted self-insured plans from mandated benefit laws based on ERISA's preemption of employee pension and welfare benefit plans.¹⁰

Arguments for and against mandated health insurance benefits. Generally, mandated health insurance benefit laws are supported by providers and recipients of the treatment to be covered, and they are opposed by businesses and insurers. Proponents of mandated health benefits base their arguments primarily on medical and social premises. Opponents base theirs largely on economics and costs.

Arguments for. Those who support specific mandated benefits say that gaps in insurance coverage keep individuals from seeking or receiving much needed care.

They say that the current system is inequitable by discriminating against certain providers, such as psychologists or chiropractors, or against certain conditions, such as mental illness. This discriminatory system often prevents individuals from obtaining more efficient or more effective care.

Supporters contend that mandated benefits would support the development and maintenance of a wider range of effective treatment settings. They also say that improved health insurance coverage will lead to cost savings in the long run even

though mandated benefits might lead to increased utilization. For example, proponents for mandated benefits for the treatment of alcoholism argue that there would be offset savings from the reduction of other general medical and hospital services currently used by alcoholics. Another argument is that mandated coverage would spread costs over many people, thereby increasing the size of the risk pool and keeping costs down.

Arguments against. Employers have generally been opposed to mandated benefits since they pay most of the cost of health insurance. They say that mandated benefits add to the cost of employment and to the cost of production and that they reduce other—perhaps more vital—benefits. Small businesses complain that they are especially affected adversely by mandates because they have lower profit margins and are less able to absorb increased premium costs. Insurers oppose mandates because they create an incentive for employers to self insure, thereby reducing the risk pool and making insurance coverage more costly and insurers less competitive.

Opponents say that mandates could raise the cost of premiums beyond what employers and consumers may be willing to pay and reduce the total number of individuals to whom coverage is available. Employers could also shift more of the cost of premiums to employees.

Critics also say that financing health care through insurance mandates is highly regressive since they raise premium costs for all, resulting in a greater hardship on individuals with lower incomes. They argue that this is especially unfair when the mandates reflect the needs of only special interest groups.

Finally, there is the argument of freedom of choice. Opponents say that mandates reduce the freedom of employers, employees, and unions to tailor benefit

packages of their own choosing and that they interfere with the collective bargaining process. They also run counter to the effort to avoid overinsurance and to encourage a prudent buyer approach by consumers.

Health Insurance in Hawaii

Health care is one of Hawaii's largest industries. It is larger than the construction industry and more than three times the size of sugar and pineapple. Statistics indicate that Hawaii's population is healthier than that of the rest of the United States. Hawaii ranks first in the nation in longevity for both men and women. Hawaii also has one of the lowest death rates in the United States.¹¹

Hawaii's population is comparatively well insured in terms of the number covered and the breadth of coverage. The HMSA is the Blue Shield plan for Hawaii. It provided health insurance coverage to more than 60 percent of the civilian population in 1986.¹² The second largest health insurer is the Kaiser Foundation Health Plan, a nonprofit health maintenance organization (HMO) which covers approximately 15 percent of the population. Island Care, comprised of a group of participating providers including the Honolulu Medical Group, Garden Island Medical Group, and Hilo Medical Group, is Hawaii's third largest health insurance plan.

In addition to these private programs, health insurance coverage is provided by Medicare, Medicaid, and the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) program for military dependents and military retirees.

Two important laws define and constrain health insurance in Hawaii. These are the State's Prepaid Health Care Act and the Hawaii Public Employees Trust Fund.

Prepaid Health Care Act. Hawaii is unique in health insurance coverage since it is the only state in the nation with a mandatory health insurance law. The Hawaii Prepaid Health Care Act was enacted in 1974 after a study commissioned by the Legislature found that a significant number of the State's employed were not adequately protected by health insurance. The act was intended to ensure adequate access to health services for Hawaii's working population.

All employers with one or more regular employees (those working at least 20 hours per week) must provide them with health insurance benefits. These benefits must be equal to, or "medically reasonable" substitutes for, the benefits offered by prepaid health plans which have the largest number of subscribers in the State.

The law also specifies that every plan must include the following basic benefits:

- . 120 days of hospital benefits per calendar year plus outpatient services;
- . Surgical benefits, including anesthesiologist services;
- . Medical services, including home, office, hospital visits by a licensed physician, and intensive medical care;
- . Laboratory, X-ray, and radio-therapeutic services; and
- . Maternity benefits.

Employers must submit their health insurance plans to the Director of the Department of Labor and Industrial Relations to determine if the plan meets the standards in the law.

The employer must pay at least half of the premium cost. However, the employee's contribution may not exceed 1.5 percent of the employee's monthly wages. The act exempts government employees, employees covered by a federal

program or receiving public assistance, agricultural seasonal employees, insurance and real estate salesmen, or brokers paid solely on commission.

Legal issues. In 1976, the Prepaid Health Care Act was amended to add insurance benefits for the treatment of substance abuse. Shortly thereafter, Standard Oil of California filed suit against the State on the grounds that ERISA preempted any state laws which regulate employee benefit plans. Standard Oil was particularly opposed to the amendment requiring coverage for substance abuse treatment. In a decision that was upheld by the U.S. Supreme Court in 1981, the courts found that the Hawaii Prepaid Health Care Act did constitute an employee welfare benefit plan within the definition of ERISA and was therefore preempted by ERISA.¹³

In 1983, Hawaii's congressional delegation obtained an amendment exempting the Prepaid Health Care Act from ERISA. However, the exemption was limited to the law as it was enacted in 1974. ERISA would continue to preempt any amendments made to the Prepaid Health Care Act after 1974 except where the amendment was needed for more "effective administration" of the law.¹⁴

In 1984 the Council of Hawaii Hotels brought suit against the State to prevent enforcement of a 1978 amendment to the Prepaid Health Care Act requiring plans resulting from collective bargaining to have benefits that are equivalent to those imposed by the act. The Council argued that the amendment involved more than was necessary for "effective administration" of the law. The U. S. District Court agreed, holding that the 1983 exemption to ERISA was intended to be construed narrowly and that the 1978 amendment regulating collectively bargained plans could not be interpreted as providing for more "effective administration" of the law.¹⁵

These decisions raise questions about the legality of mandated health insurance laws in Hawaii. Although mandated insurance laws have been found to fall within the authority of states to regulate insurance, there may be a problem in Hawaii because Hawaii is the only state in the nation to also have a prepaid health insurance law. The law requires all employers to provide certain insurance benefits but limits these to those mandated in 1974 or those covered by the most prevalent health plan. Amendments made in 1976 requiring insurance coverage for substance abuse were specifically voided by the courts.

If a mandated benefit is enacted, e.g., for substance abuse, then all insurance plans, including the most prevalent plan, HMSA Plan 4, must provide the benefit. This in turn would mean that all employers must purchase the benefit in order to comply with the Prepaid Health Care Act. It is possible that any mandated benefit will be challenged as a way of bypassing the limitations placed on the Prepaid Health Care Act by ERISA.

Public Employees Health Fund. Chapter 87, HRS, creates a Public Employees Health Fund to finance health insurance benefits for state and county employees and retirees. The State and the counties are the largest purchasers of health insurance in Hawaii, currently paying out over \$70 million in premiums annually.¹⁶

The fund is administered by a board of trustees that determines the scope of benefit plans, contracts for the plans with insurance carriers, and establishes eligibility and operating policies for the health fund.

While the scope of benefits to be provided is determined by the trustees, the amount contributed by public employers towards the premium is established through collective bargaining. Currently, the employers' portion is approximately 60

percent with employees contributing the remaining 40 percent. The employers' contribution is fixed for the duration of the collective bargaining contracts.

Unless a specific exemption is made for the State and counties, the state health fund will be subject to any mandated benefits law. Any increase in premium costs for current employees resulting from the mandate will have to be absorbed entirely by the employees since the employers' contribution has already been fixed under current collective bargaining contracts.

Another problem would be any increase in premium cost for retirees. The health fund law requires public employers to pay for the full cost of health fund benefits for retirees. This amounted to \$27.9 million in premiums in 1987.¹⁷ One in three enrollees in the health fund's medical plan is now a retiree. Retirees now consume a greater share of fringe benefit funds on a pro rata basis than active employees. The costs are expected to increase due to the increasing number of retirees, inflationary health care costs, and longer life expectancies.

Legislative concern about the high cost of premiums for retirees led the Legislature to adopt Senate Resolution No. 138 in 1987, asking for a study of benefit costs for retirees and alternatives that would enable the State to continue a reasonable level of funding of benefits for employees and retirees.

Assessment of Proposals for Mandated Health Insurance Benefits

Over the years, an increasing number of proposals for mandated insurance benefits have come before the Legislature. There has been concern over the cost impact of these proposals and their effect on the quality of care. Proponents and opponents of these measures seldom agreed on their costs and benefits.

Hawaii followed the solution adopted by several other states, such as Washington, Oregon, and Arizona, in enacting legislation calling for a systematic assessment of the social and financial impact of mandated health benefits and their overall effect on the health care delivery system.

Unlike some states where assessments are done by proponents of such measures, the Hawaii State Legislature was concerned with the financial burden such studies would place on health care providers and the questionable validity of assessments conducted by those other than an independent third party. Therefore, Act 331 states that before any measure proposing mandated health insurance benefits can be considered, the Legislature shall adopt concurrent resolutions requesting the Legislative Auditor to conduct an assessment of the social and financial impacts of the proposed mandated insurance coverage.

Criteria for assessments. Act 331 requires the Legislative Auditor to evaluate proposals to mandate health insurance coverage according to the following social and financial criteria:

"The social impact.

1. The extent to which the treatment or service is generally utilized by a significant portion of the population;
2. The extent to which such insurance coverage is already generally available;
3. If coverage is not generally available, the extent to which the lack of coverage results in persons being unable to obtain necessary health care treatment;
4. If the coverage is not generally available, the extent to which the lack of coverage results in unreasonable financial hardship on those persons needing treatment;
5. The level of public demand for the treatment or service;
6. The level of public demand for individual or group insurance coverage of the treatment or service; and

7. The level of interest of collective bargaining organizations in negotiating privately for inclusion of this coverage in group contracts; and
8. The impact of indirect costs which are costs other than premiums and administrative costs on the question of the costs and benefits of coverage."

"The financial impact.

1. The extent to which insurance coverage of the kind proposed would increase or decrease the cost of the treatment or service;
2. The extent to which the proposed coverage might increase the use of the treatment or service;
3. The extent to which the mandated treatment or service might serve as an alternative for more expensive treatment or service;
4. The extent to which insurance coverage of the health care service provider can be reasonably expected to increase or decrease the insurance premium and administrative expenses of policy holders; and
5. The impact of this coverage on the total cost of health care."

In conducting the assessment of the proposed measure, we reviewed the research literature for information on the utilization, coverage, cost, and impact of insurance coverage in other jurisdictions. We examined similar mandates in other states for their experience with the cost effectiveness of the proposed coverage. We gathered and analyzed information from insurers, providers, and other programs providing insurance coverage in Hawaii. Interviews were held with employers, unions, and other interested parties to assess public interest and demand for the proposed coverage.

The major sources of information on utilization, coverage, and costs were HMSA, Kaiser, and Island Care. We also analyzed data on the Medicare, Medicaid, and CHAMPUS programs taking into account these programs will not be affected by the proposed measures and do not serve a comparable population.

Chapter 3

BACKGROUND ON CHIROPRACTIC SERVICES

This chapter presents some background information on chiropractic services for which mandated insurance coverage is being proposed. We also discuss the proposed bills, their scope, and the impetus behind them.

Background on Chiropractic

Chiropractic is a branch of the healing arts that originated from a theory developed in the late 1800s that illness and disease were caused principally by subluxations, or dislocations and misalignments of the vertebrae. The theory held that these subluxations interfere with normal nerve transmissions and that spinal manipulation and adjustment could restore the normal functioning of the nervous system and thereby cure the disease and illness.¹ Today, the chiropractic profession has rejected the single cause of disease theory. The profession believes that disease processes are influenced by a multiplicity of factors but continues to emphasize that disturbances of the nervous system are an important contributing factor.

Modern chiropractic concentrates on spinal biomechanics, musculoskeletal and neurological relationships. While chiropractors do treat other ailments, the overwhelming portion of their practice is devoted to treating neuromusculoskeletal conditions associated with the spine, i.e., biomechanical dysfunctions resulting in lower back pain, chronic neck and back problems, etc.

According to a professional survey in 1986, over 87 percent of chiropractic treatment was for neuromusculoskeletal conditions.² The primary chiropractic

treatment method still involves spinal manual therapy. Chiropractors treat biomechanical disorders of the spine by spinal adjustments to relieve musculoskeletal symptoms such as back or neck pain and attendant neurologic disturbances that cause referred pain to peripheral areas such as the arms and legs.

As primary health care providers, chiropractors make independent diagnostic decisions on patient treatment and referrals to other health care professionals. Chiropractors use the standard procedures and instruments of physical and clinical diagnosis in addition to other diagnostic methods such as postural and spinal analysis. Physical examinations normally include neurologic and orthopedic testing such as testing for range of motion and sciatica nerve involvement. Clinical diagnostic methods may include X rays and laboratory tests. Treatment methods, in addition to spinal adjustments, include manipulation of soft tissue and extremities, and physiotherapeutic procedures to alleviate neurologic and muscular disturbances.³

All 50 states and the District of Columbia require chiropractors to be licensed.⁴ Currently, there are an estimated 30,000 chiropractors in active practice in the United States.⁵ In Hawaii, where licensing has been required since 1919, there are currently 309 licensed chiropractors of which 155 have Hawaii addresses.⁶

The Chiropractic vs. Medical Conflict

At the close of the nineteenth century when chiropractic emerged as an alternative system of healing, the relations between chiropractic and medicine became strained. While other professions such as homeopathy and osteopathy joined the mainstream of medicine, chiropractic did not. Chiropractic maintained its identity as an alternative health care system and its relations with the medical professional have remained hostile. The position of the American Medical

Association (AMA) and its affiliated organizations was that it was unethical to associate or cooperate with chiropractors.

This long standing professional conflict between chiropractic and medicine has had many ramifications. The medical profession has often made reference to chiropractic as being unscientific, dangerous, or worse. The chiropractic profession has countered that the medical concerns are more related to economic competition.

In 1976, several chiropractors brought suit against the AMA and numerous other medical associations and societies charging them with attempting to destroy the chiropractic profession in the United States in violation of antitrust laws. Several of the medical associations and societies settled their cases by agreeing to affirm the rights of chiropractors.

In August 1987, a U.S. District Court in Chicago finally ruled that the AMA, the American College of Radiologists (ACR), and the American College of Surgeons (ACS) had sought to contain and eliminate chiropractic as a profession. Without considering the merits of chiropractic, the judge ruled that the conspiracy was an unreasonable restraint of trade which violated the Sherman Antitrust Act. The AMA, as well as the ACR and ACS, were enjoined from restricting or impeding its members from associating professionally with chiropractors and were ordered to communicate this policy to all their members.⁷

There is little sound research on the comparative merits of medical and chiropractic care in terms of cost-effectiveness and functional effectiveness. Proponents contend that chiropractic is cost-effective because it is a replacement for more expensive medical care. They say it results in relief of back ailments and returns more people to work more quickly. Opponents discredit these claims.

Research studies on this issue are generally dated and biased towards those performing or commissioning the study. Those published in chiropractic journals indicate that care is less expensive since surgery and drugs are not used and that it is more effective. Studies completed by insurance companies indicate that the cost of chiropractic care has skyrocketed when insurance benefits are offered and that chiropractors provide an excessive number of services. No clear answers are available to these issues.

Mandated Coverage in Other States

As of 1987, 45 states have passed some type of insurance equality law mandating that chiropractic be included in commercial insurance policies. These policies include health, sickness, accident, and disability insurance. Also in 26 of these 45 states, the insurance equality laws mandating chiropractic have been extended to include all health care contracts such as Blue Cross and Blue Shield health insurance plans. Some states mandate that optional chiropractic insurance coverage be offered under a rider. Also, Arkansas has mandated that all policies must provide insurance equality for chiropractic but includes a provision that allows the insured to elect to purchase a policy that excludes chiropractic.

The 26 states that mandate chiropractic insurance equality for insurance policies and health care contracts have legislation that is similar to that proposed for Hawaii. The legislation does not mandate additional specific health care services but simply mandates that chiropractors be included as health care providers in all policies. If a policy includes health care services that are within the chiropractic scope of practice, the consumer is free to choose a chiropractor instead of other authorized health care providers.

Proposed Legislation

Senate Bill No. 1173 and House Bill No. 343 propose to amend Chapters 431 and 433, Hawaii Revised Statutes, to require all individual or group hospital or medical service plan contracts to provide reimbursements for health services performed by chiropractors that are within their lawful scope of practice whenever these contracts provide for reimbursements from medical doctors or physicians.

The bills find that the public should have the option of obtaining a full range of health care services, including doctors of chiropractic. They state that the current exclusion of doctors of chiropractic from health insurance policies tends to be discriminatory and denies individuals the right to reimbursement.

Testimony at the Legislature. The chiropractic profession was the major proponent at the legislative hearings on the proposed chiropractic coverage. The Hawaii State Chiropractic Association testified that it had "hundreds of pages of petitions signed by patients who want chiropractic care covered." It testified that without insurance coverage, the citizens are denied freedom of choice in health care and must either utilize the services of physicians who are covered by the Hawaii Medical Service Association (HMSA) or must pay for chiropractic services out of their own pocket. It maintained that this discrimination was unfair because chiropractors provide alternative, less costly health services which would result only in a redistribution of the prepaid health care dollars instead of additional costs.⁸

Opponents of the proposed coverage included the HMSA, the Hawaii Medical Association (HMA), and representatives of the business community. The HMSA maintained that there was limited demand for chiropractic coverage and testified that the bill, if passed, would result in an additional cost of \$9.4 million to HMSA members.⁹ The HMA testified that the public should be warned of the hazards to

health in entrusting the diagnosis and treatment of conditions such as cancer and heart disease to "practitioners who rely on the theory that all disease is caused by misalignment of spinal vertebrae and can be cured by manual manipulation and adjustment of the spine."¹⁰ Spokespersons from the business community cited HMSA cost estimates and brought up the impact that mandated coverage would have on premium costs and on businesses.¹¹

Legislative action. In its committee report, the House Committee on Health noted that chiropractic services had become widely accepted as a component of the modern health care system; it was already accepted for reimbursement under workers' compensation and Medicare.¹²

Subsequently, when the Senate measure, S.B. No. 1173, was considered by the House Committee on Consumer Protection and Commerce, the committee responded to some of the concerns expressed at hearings by amending the bill to allow insurers to set limits on what would be reasonable coverage and to provide a schedule of frequency and payments. The committee would also require a review of the impact of the mandated coverage.¹³

Neither H.B. No. 343, H.D. 1 nor S.B. No. 1173, H.D. 1 passed; instead, separate legislation was enacted requiring an assessment by our office of the impact of mandating insurance coverage.

Chapter 4

SOCIAL AND FINANCIAL IMPACT OF INSURANCE COVERAGE FOR CHIROPRACTIC SERVICES

This chapter assesses the impact of mandating coverage for chiropractic services according to the social and financial criteria set forth in Chapter 331. We also assess whether the proposed legislation will accomplish the ends sought by the Legislature.

Summary of Findings

Due to limitations in data, it was not possible to provide clear cut answers to some of the questions on the social and financial impacts of mandating insurance coverage for chiropractic services. However, we did find the following:

1. Nationally, the utilization of chiropractic services has increased since the 1960s. In Hawaii, however, utilization is difficult to gauge due to limitations in coverage and in the availability of data.

2. The proposed coverage exceeds that which is currently available from the major insurers.

3. There is no evidence that inadequate coverage has resulted in lack of treatment or in financial hardship. However, inadequate coverage could be a barrier to treatment of choice.

4. For a variety of reasons, it was not possible to assess accurately the demand for chiropractic coverage.

5. It is probable that use, premium costs, and overall costs of treatment will go up with mandated coverage; however, the extent of the increase cannot be determined.

The Social Impact

The extent to which chiropractic services are used by the general public. The need for mandated insurance coverage for chiropractic services depends on the extent to which people use the treatment services. Nationally, the utilization of chiropractic services appears to have increased. The American Chiropractic Association (ACA) estimated in 1964 that there were 4,250,000 chiropractic patients. A more recent survey by the ACA estimated that there were 10,700,000 chiropractic patients in 1984.¹

The increase in the use of chiropractic services is probably due to the prevalence of neuromusculoskeletal conditions, especially lower back problems. Patients with low back pain represent a major segment of the chronically disabled. It has been estimated that 80 percent of the adult population will at some point in their lifetime experience back pain problems.²

Chiropractic specializes in treating these neuromusculoskeletal conditions. According to another survey conducted by the ACA in 1986, over 87 percent of chiropractic treatment was for neuromusculoskeletal conditions and about 50 percent of chiropractic practice was devoted to the low back (pain, sprain and strain) area of the spinal column.³

The National Medical Care Utilization and Expenditures Survey (NMCUES), which was conducted by the U. S. National Center for Health Statistics of the Public Health Service, studied visits to different types of practitioners by the noninstitutionalized population of the United States. The survey found that an estimated 9 million persons (out of a total of 223 million) made a total of 75 million visits to chiropractors in 1980. Chiropractic patients averaged 8.3 visits per year and nearly half of all patients had five or more visits.⁴

NMCUES data also indicated that the majority of visits were for neuromusculoskeletal conditions. Approximately 65.9 percent of all visits to chiropractors were for "diseases of the musculoskeletal system and connective tissue," and 9.2 percent were for "diseases of the nervous system."

Although there is no data on the number of persons suffering with neuromusculoskeletal problems in Hawaii, there are indications that the prevalence of chronic back or spine conditions is high in Hawaii. According to the State of Hawaii Data Book 1985, "Impairment of back or spine" ranked second in prevalence when compared with other chronic conditions in 1983.⁵ It was estimated that 53,193 persons suffered from chronic back or spine problems which represented 54 conditions per 1,000 persons. The 1986 "Data Book" indicates that back or spine impairment was the third most prevalent chronic condition in 1985 involving a total of 51,849 persons or 51.1 conditions per 1000 persons.⁶

The main source of information regarding chiropractic utilization in Hawaii was the Hawaii Medical Service Association (HMSA). This utilization information is severely limited since HMSA offers chiropractic insurance only in the form of a rider which covers 12 visits per calendar year for back problems and pays about \$10 a visit. In addition, HMSA could only provide utilization data for the rider program for calendar year 1986. HMSA reported that of the 42,555 enrollees in the chiropractic rider plans during 1986, 880 members made a total of 6,437 chiropractic visits or an average of 7.3 visits per case.

The commercial carriers who offer health and accident insurance in Hawaii, such as Aetna Life and Casualty and Metropolitan, include chiropractors as "providers" along with other types of physicians. However, they were unable to provide chiropractic cost and utilization data.

The Medicare program provides limited coverage for chiropractic services, but this data would not be useful in determining need since Medicare covers a different population in a limited way.

In 1986, the Hawaii State Chiropractic Association (HSCA) sponsored a research study of Oahu residents to determine the proportion that had used chiropractic and their attitudes toward the profession. The study indicated that 27 percent of Oahu adults had used chiropractic at least once and that 11 percent had utilized chiropractic within the past year. The study reported that 5 percent of the 400 people interviewed utilized chiropractors regularly. Regularly was not defined, but the other two categories of utilization were defined as "just once or twice" and "several times but for one problem." A total of 53 percent of the people interviewed that had been to a chiropractor indicated back or spinal problems as the reason for their most recent chiropractic treatment.⁷

The extent to which the proposed coverage is already generally available. The proposed measures mandate that chiropractors be included in all individual or group hospital or medical service plan contracts and be reimbursed for their services on the same basis as a medical doctor or other physician. Health and accident policies offered by commercial carriers have coverage comparable to that proposed in the bills. However, only limited coverage is available to HMSA group members under a rider, and no coverage is provided by Kaiser and the other health maintenance organizations (HMO).

The commercial carriers that offer chiropractic coverage include the Continental Association of Resolute Employers which offers two health plans that include chiropractic coverage under physicians benefits, Travelers, and Aetna. We

were unable to locate any statistics on the number of individuals covered by these commercial health insurance policies, but we estimate that there are about 40,000 persons having such coverage.

Since 1980, HMSA has offered limited insurance coverage for chiropractic services in the form of a rider to employer groups of twenty or more. According to HMSA, 450,000 members are eligible for chiropractic rider coverage. Currently, 203 groups consisting of 26,714 persons are enrolled in the chiropractic rider program. (The drop in the number enrolled from 1986 is because one group changed from HMSA to another health plan administrator.)

The rider coverage provides a fixed payment of \$10 for each office visit to a maximum of 12 visits per calendar year. It also pays for 50 percent of eligible charges for X rays of the spine only, up to \$50 per calendar year. The chiropractic coverage is limited to services that are necessary for the diagnosis or treatment of an injury or illness of the back.

Kaiser and Island Care do not have chiropractic coverage except in their senior plans which provide Medicare supplementary coverage. The Medicare program covers chiropractic services only for subluxations of the spine which can be demonstrated by X ray. A maximum of one service per month is covered. Medicare pays 80 percent of the Medicare approved charge, and the senior plans cover the member's 20 percent copayment.

If coverage is not generally available, the extent to which the lack of coverage results in persons being unable to obtain necessary health care. We found no evidence linking the failure to receive adequate care to inadequate insurance coverage.

The lack of insurance coverage for chiropractic could be a barrier to obtaining the *treatment of choice* but it does not bar access to treatment *per se*. The three major health insurance carriers—HMSA, Kaiser, and Island Care—do provide coverage for neuromusculoskeletal conditions when the services are provided by a medical physician or an osteopath.

However, except for those covered by commercial carriers or under the HMSA rider, patients who are dissatisfied with medical care can only obtain alternative chiropractic care if they can afford the out-of-pocket costs. We were unable to obtain any quantitative data on the number of individuals who were unable to receive necessary health care because of the lack of chiropractic coverage.

If coverage is not generally available, the extent to which the lack of coverage results in unreasonable financial hardship on those needing the treatment. Chiropractic treatment programs could result in financial hardship for those seeking such care, but we found no evidence that this is occurring.

Individuals without chiropractic coverage must pay all of the treatment cost and those who have HMSA rider coverage must pay proportionately more of the cost of chiropractic treatment than they would if they had utilized medical care. Treatment programs for severe spinal problems could result in financial hardship for those not having insurance coverage since the treatment protocol for chronic or acute spinal conditions, especially in the low back, is very extensive and costly whether the services are provided by the medical or the chiropractic profession.

Chiropractors and chiropractic patients provided anecdotal accounts of patients who wanted or needed chiropractic treatment for neuromusculoskeletal conditions but had to either pay for the chiropractic services out of their own pocket or use physicians who were covered by HMSA or other insurance carriers.

The level of public demand for the treatment or service. We were unable to determine the level of public demand in Hawaii because of the limitations in available data. No studies have been done which measure the degree to which people in Hawaii are interested, motivated, and able to seek chiropractic treatment.

However, neuromusculoskeletal problems are prevalent, and national data from the ACA does show a significant increase in the utilization of chiropractic services between 1964 and 1980, reflecting perhaps an increasing interest in alternative health care. A survey conducted in 1982 found that 36 percent of the respondents had sought treatment from a non-M.D. physician and of this 36 percent, 68 percent had gone to a chiropractor for treatment.⁸

Proponents and opponents of mandated insurance view demand in different ways. Chiropractors and chiropractic patients perceive demand to be high because they see a significant need for chiropractic treatment of spinal conditions. Insurers and employers, on the other hand, perceive demand and need to be low. HMSA maintains that similar care is being adequately provided by medical physicians and osteopaths. These contradictions make the assessment of demand difficult.

Researchers have found that the demand for a treatment or service is an outgrowth of many factors of which insurance is only one. They have found that demand for services and treatment increase when coverage is expanded and when constraints on coverage are removed. Our health care system is such that people tend to seek treatment for which they have coverage. Thus, when coverage is increased so does the demand for care.

The level of public demand for individual and group coverage of the treatment or service. There appears to be little demand for individual or group coverage of chiropractic services. However, demand may be a poor indicator of the need for

mandated coverage. Most health insurance is sold to groups, with employers or unions acting on behalf of employees. Consumers make few choices about benefits.

The major insurers reported little or no demand for coverage of chiropractic services from either outside groups or its members. The HMSA says it determines market demand from two sources: the contacts their field representatives make with employer groups and the inquiries made to their customer service department. HMSA and the other insurers report no group requests for increased coverage for chiropractic. According to HMSA, their customer service department received about three to four inquiries per month before the chiropractic rider was offered. Since the rider has been available, the department has received about one or two inquiries per year.

On the other hand, the Hawaii State Chiropractic Association says that it has hundred of pages of petitions signed by patients who say they want chiropractic coverage.

There is a general lack of information about what consumers want in the way of benefits. No formal surveys have been conducted in Hawaii on consumer preferences, and insurers do not as a rule survey their membership about benefits. Even nationally, little is known about how choices in group insurance are made and the role of the employee in this process.

Our interviews with insurers and employer groups tended to confirm that individual choice or preference plays a minor role in the purchase of benefits. Most health insurance is sold to groups, with the benefit structure determined through negotiations between the insurer and employer. The employers' first concern is to comply with the Prepaid Health Care Act, which sets the minimum benefit levels.

Thereafter, employers look at the cost advantages of plan designs, such as deductibles, the cost of retention, interest paid on reserves, and administrative fees.

Individual plans are usually offered and purchased as complete packages. Enrollees cannot as a rule select any additional coverage available to groups through riders. For example, HMSA's rider for chiropractic coverage is available only to group plans with 20 or more enrollees.

The level of interest of collective bargaining organizations in chiropractic services. In the past, some unions established plans to provide chiropractic coverage for their membership from union health funds. However, among the collective bargaining organizations we interviewed, we found no current interest in adding or increasing insurance coverage because of the cost implications.

Unions, as well as employers, have become increasingly aware of the costs of coverage. Interviews with administrators of the Public Employees Health Fund and several bargaining agents for public and private employees showed that there is little or no interest in negotiating for added or increased coverage of chiropractic services in group contracts. Coverage for chiropractic services is felt to be a low demand area when compared to more popular areas of coverage such as vision care, dental care, and prescription drugs.

The impact of indirect costs other than premiums and administrative costs, on the question of the costs and benefits of coverage. We found no evidence that mandating coverage would have an impact on the indirect costs of health conditions that are normally treated within the scope of chiropractic practice.

National estimates of the treatment and compensation costs for individuals suffering from back pain exceed \$14 billion annually.⁹ In addition, there are significant indirect costs resulting from reduced productivity, absenteeism, and lost

employment. Chiropractors maintain that chiropractic treatment is very effective for back pain problems and that mandating coverage should result in less absenteeism and loss of productivity as well as reduce the cost for expensive medical treatments involving hospitalization and surgery. However, we found no studies focusing on the topic of the societal costs and benefits of mandates generally or for chiropractic in particular.

Financial Impact

The financial impact criteria focus on the costs of treatment; whether the mandate would result in alternative, less expensive treatment; and what the effects might be on the costs of premiums and the total cost of health care.

The extent to which insurance coverage of the kind proposed would increase or decrease the cost of treatment or service. The impact on cost is inconclusive. There is a potential for decreases in the cost of treatment if mandated insurance coverage results in price competition. On the other hand, potential increases in cost resulting from increased coverage are also likely. In the absence of proof either way, we did not build any price increases into our later cost projections.

Mandated insurance coverage for chiropractic services could encourage the use of chiropractic services, thereby increasing competition among chiropractors, physicians and osteopaths who treat similar conditions. However, our review of the research indicates that patients generally view chiropractors and physicians as distinct types of providers and the services provided by each are not viewed as interchangeable. Thus, there may be some competition, but it will probably be limited. We could not conclude that mandating coverage would promote any real price competition.

The current thinking regarding insurance coverage suggests that providing coverage for a health provider or a health service results in an increase in the price of the provider fees or of that service. The Medicare and Medicaid programs are often cited as primary examples of what happens to prices when insurance coverage is provided. The magnitude and nature of the proposed coverage for chiropractic services, however, are much different from Medicare or Medicaid, and are not likely to have the same results.

Research from other states comparing chiropractors' fees before and after insurance coverage, and physician's (by specialty) charges during the same periods focused on "cost per case" comparisons and fail to shed light on this issue. Generally, cost per case comparisons overstate charges by chiropractors and understate charges by physicians.

The problem with "cost per case" comparisons lies in the difference in provider practices between chiropractors and medical practitioners. Chiropractors generally provide all diagnostic and treatment services including X rays and physiotherapy in their own offices. As a result, for insurance purposes, all aspects of treatment for a patient are accounted for and charged as a single case.

The M.D.'s and osteopaths generally refer cases to varying degrees. For example, a patient may go to a general practitioner (G.P.) for a spinal problem. The G.P. may refer the patient to a radiologist, an orthopedic surgeon, and a physical therapist for X rays, diagnosis, and treatment of the problem. In this scenario, the patient would show up as at least two separate cases: one for the G.P. and another for the orthopedic surgeon. The X ray and physical therapy charges are accounted for separately, and there is no way to tie together the various charges by the different medical providers. Thus, the average medical "cost per case" will be understated.

We requested information from HMSA on the effect of the insurance rider for chiropractic care which was introduced in 1980. The HMSA data was on an average "cost per case" basis and compared chiropractor costs for treatment of back problems with costs of other providers for treatment of any medical problem. Consequently, the data could not be used for any type of cost analysis. The average charge per visit data, however, does provide some indication of the relative increases in charges for the different types of providers.

Table 4.1 presents the average charge per visit between 1978 and 1986 for several different kinds of providers and the percent change in charges during that period.

Table 4.1
Average Charges by Provider Type

	Average Charge Per Visit			Percent Change		
	1978	1984	1986	1978- 1984	1984- 1986	1978- 1986
	General practitioner	\$13.70	\$26.19	\$26.19	91	16
Orthopedic surgeon	20.10	35.51	40.49	76	14	101
Osteopath	18.30	27.21	32.72	4	20	78
Podiatrist	*	24.08	26.63	*	10	*
Chiropractor	13.00	33.42	25.44	157	-24	96

Source: HMSA (average charges).

*Not available

The results are somewhat inconclusive. Charges for chiropractic services increased dramatically, 157 percent, between 1978 and 1984, and at a much higher rate than that of other practitioners. However, chiropractors are also the only providers who actually decreased their charges between 1984 and 1986. For the

eight years between 1978 and 1986 chiropractors increased their charges an average of 96 percent, which is in line with the increases made by other practitioners.

The extent to which the proposed coverage might increase the use of the treatment or service. Here again, research into the experiences of other states provided no clear-cut answers, although there is a general consensus that the use of health care services increases with insurance coverage.

Studies by insurers have demonstrated increased expenditures by insurers in states where insurance benefits for chiropractic care were mandated by law. However, it is not clear whether there was an increase in utilization of services before and after the insurance benefit was mandated. Thus, it can be established that the number and dollar amount of chiropractic services covered by insurance have increased, but it cannot be established whether individuals have begun to use chiropractors more since the service was covered by insurance.

There are several ways that the use of chiropractic services might increase with the implementation of mandated benefits. *First*, those who currently have some form of coverage and are using the services might increase the number of chiropractic visits because of the richer coverage related to copayments and number of visits. *Second*, those who have no insurance coverage and those who currently have limited coverage and have not sought treatment might be encouraged by the mandated coverage to seek chiropractic services. *Third*, those who currently are not covered for chiropractic care but are paying out-of-pocket for such services will take advantage of the mandated coverage. Their expenses will be shifted to the insurer.

The extent to which the mandated treatment or service might serve as an alternate for more expensive treatment or service. Proponents of insurance

coverage for chiropractic services maintain that chiropractic care is a more cost-effective mode of treatment for neuromusculoskeletal conditions than medical care provided by physicians. They also argue that chiropractic care as an alternative mode of treatment for such conditions, especially back problems, would avoid expensive medical services for surgery and related inpatient hospital care.

Those who argue against insurance coverage of chiropractic care state that while chiropractic manipulative therapy can have clinical value in the treatment of back pain, chiropractic is not an alternative to medical care for many spinal or neuromusculoskeletal conditions. They also say that the chiropractic treatment protocol generally involves a greater number of visits and therefore is not cost-effective.

There have been relatively few studies that have attempted to either prove or disprove the theory that chiropractic care is a less expensive alternative to medical care. We received literature from various representatives of the chiropractic profession supporting their position. We also received information from HMSA that says chiropractic is not cost-effective.

Research support for chiropractic cost-effectiveness. The chiropractic profession provided us with the results of several studies dealing with workers' compensation programs in various states including California, Wisconsin, Florida, Kansas, Iowa, Montana, and Oregon. These studies compared treatment cost for medical and chiropractic care for injuries covered by workers' compensation programs. The workers' compensation program studies reported favorable costs for chiropractic care. The chiropractic profession has circulated the results of these studies for many years to demonstrate the cost-effectiveness of chiropractic care.

A recent literature review found a total of 17 studies conducted in the United States on workers' compensation programs which described chiropractic as a distinct health care regimen.¹⁰ Of the 17 studies, 15 compared chiropractic and medical costs. Of those 15 studies, 14 showed chiropractic to be more cost-effective than medical care. However, these studies were all completed before 1980 and are somewhat dated. The most recent study, done in 1981 in West Virginia, showed chiropractic care to be more costly.

A major problem with the workers' compensation studies is the difficulty of controlling the research. It has been pointed out for example, that to properly compare the cost of chiropractic care and medical care, the sample should consist of patients with similar ailments. However, diagnoses of back problems are difficult and not necessarily backed up by objective evidence. Diagnosis is usually based on an individual patient's medical history, clinical tests and observations, and the judgment of the provider. Disparate and multiple diagnoses can and do occur.¹¹ Even when the research attempts to compare costs on the basis of identical diagnoses, treatment methods are not standardized among physicians, osteopaths, and chiropractors.

Another problem with the workers' compensation studies is that it is difficult to transfer the findings to fee-for-service and other prepaid health plans. The results may show that chiropractic has the potential to be cost-effective, but this does not necessarily mean that mandating coverage of chiropractic services would be cost-effective. It is likely that injuries covered under workers' compensation would be more acute than those conditions generally covered under health insurance plans.

Representatives of the chiropractic profession also provided our office with studies showing the potential of spinal manipulation for relief of back pain. One problem with some of the studies is that they were conducted with patients that had chronic or acute spinal conditions and in one study, all the patients were totally disabled. The results, therefore, may not be representative of primary care treatment of patients with less serious conditions.

Critical reviews of the chiropractic literature on clinical trials of spinal manipulation for back pain have found that only a few of the studies were randomized, controlled, clinical trials. In addition, in some of these studies, there were design errors or flaws which could result in experimental bias. Nevertheless, the studies concluded that there was evidence of the efficacy and usefulness of spinal manipulation for the relief of back pain.

Finally, we were provided with a letter from the chairman of a large HMO in Florida which indicated that referrals for chiropractic care had prevented many useless hospitalizations and surgeries and that costs had plummeted for disc surgery and related back problems.¹² Again, while this demonstrates the potential cost-effectiveness of chiropractic as an alternative to medical care, it is impossible to predict to what extent such cost savings would occur as the result of mandated chiropractic coverage. This would depend on how well the public was informed about chiropractic services and more importantly, the willingness of medical practitioners to utilize chiropractic referral services in an effort to avoid expensive surgery and hospital expenses.

Research against chiropractic cost-effectiveness. Some medical practitioners accept that manipulation therapy can have clinical value for treatment of back pain, but argue that manipulation has limited utility for many spinal conditions.

Organized medicine and insurers also argue that chiropractic is not cost-effective because treatment protocol generally involves a greater number of visits.

The HMSA, which opposes mandated coverage, provided our office with information which purports to show that chiropractic is not cost-effective. HMSA provided a 1987 study prepared by Blue Cross and Blue Shield of Arizona which compared chiropractic and medical provider costs after the state mandated coverage and HMSA data showing a similar cost comparison of provider costs based on HMSA's insurance claims data.

The Blue Cross and Blue Shield of Arizona asserts that chiropractic care is much more expensive than medical care.¹³ The Arizona study examined the impact of mandated chiropractic coverage by making cost comparisons of chiropractic and medical providers. The study concluded that chiropractors were not more efficient providers than physicians and that coverage of chiropractic care would not reduce inpatient admissions and hospital costs. However, the study also commented frequently on the inadequacies of its data and the serious flaws with the cost analysis.

HMSA gave us data on its experience with the chiropractic rider coverage including a cost analysis of provider costs for chiropractors and other medical providers based on HMSA's insurance claims data. The HMSA takes the position that this data demonstrates that the "cost per case" is much greater for chiropractors than for medical practitioners.

Our review of HMSA data, however, indicates that no conclusions can be made. First, the data is based on cost per case. As discussed previously, the medical costs per case is misleading because patients may be counted several times

or as several cases as the result of referrals. A second problem with the HMSA data is that the cost analysis compares the costs of medical practitioners providing treatment for any health condition with chiropractors providing treatment only for back problems. The HMSA chiropractic rider only provides coverage for chiropractic services that are "necessary for the diagnosis or treatment of an injury or illness of the back." Consequently, the comparison is not valid.

We found yet another study of state mandated benefits conducted by the Blue Cross and Blue Shield Association which highlights the difficulty in analyzing the issues of alternate care and cost-effectiveness. This study also attempted to gather comparative data on cost, utilization, and benefit administration resulting from mandated chiropractic benefits in North Carolina and Indiana. The study noted that to examine the effect that mandated coverage had on total professional costs, it would be useful to analyze, "(1) the comparative costs of chiropractors and physicians for similar procedures; (2) the amount of chiropractor services that substitutes for physician care; and (3) the amount of services that are merely added on to the care provided by a physician." The study concluded, "[to] examine these questions will require more detailed data than were available for this study."¹⁴

In general, the case for mandated insurance coverage is made by members of the chiropractic provider community and the case against coverage is made by organized medicine and the insurers. Thus, a great deal of the "research" tends to be self-serving and should be interpreted with caution. In the absence of comparable data, it is difficult to draw conclusions regarding whether mandated chiropractic services would serve as an alternative to more expensive treatment or services or the potential cost offset applicable in regard to chiropractic care.

The extent to which insurance coverage of the health care provider can be reasonably expected to increase or decrease the insurance premium and administrative expenses of policyholders. The previous sections suggest that mandating chiropractic benefits will result in increases in costs for insurers but that some portion of these costs may be offset because the chiropractic care will be utilized as an alternative to medical care. We are unable, however, to determine the extent to which the mandated chiropractic services will be used as alternative health care. Consequently, it must be assumed that premiums will increase.

A number of studies have analyzed the impact of mandated insurance on the cost incurred by insurers for providing mandated coverage. The evidence consistently shows that costs to insurers rise after benefits are introduced. Since the benefits were not included before the mandated coverage, increased expenditures by the insurers would obviously result. However, these studies have focused on costs of the new benefit and not the total costs of all related claims to insurers. As one study noted, an analysis of the impact on Blue Cross and Blue Shield plans of mandated insurance on the aggregate costs for services provided by medical providers and chiropractors could not be accomplished because detailed data and systematic documentation was lacking.

The chiropractic profession provided us with three letters in support of its position that chiropractic services can be incorporated in health insurance plans without premium increases. A letter dated November 1980 from Blue Cross and Blue Shield of Alabama stated that no premium increase occurred at the time chiropractic was included in the plan. Another letter dated March 11, 1983 from Blue Cross and Blue Shield of Connecticut stated that since chiropractic was first covered, there has been no premium increase attributable solely to experience with

any one type of professional provider. Finally, a letter from a consultant actuary stated that insurance premiums should not need to be increased in Maine because of the alternative nature of chiropractic services.¹⁵

However, the information provided above did not specify the extent of the coverage, the amount of deductibles and copayments, and whether administrative expenses were included. Premium estimates for other states have ranged from no additional cost to \$1 per member per month for chiropractic care coverage.

HMSA's current premium cost for the chiropractic rider, which has limited coverage, is \$0.42 per member per month. HMSA estimates that mandated insurance for chiropractic would result in an additional premium of \$1 per member per month. Although HMSA currently processes claims for chiropractic, it expects that the claims volume will increase and additional administrative expenses will be incurred. HMSA estimates administrative costs to be about 10 percent of benefit costs in the first year and 8 percent thereafter.

Impact of this coverage on the total cost of health care. We projected the impact of mandated coverage of chiropractic services on the total cost of health care per year under three scenarios: conservative use of the services, moderate use of the services, and high use of the services. We based our cost projections on the following data:

- . the number of people who would be affected by the mandate,
- . the percentage of people who would use chiropractic services,
- . the average number of visits per year,
- . the average rate of radiology claims per visit, and
- . the average charge per visit for chiropractic services and the average charge for radiology services.

Numbers affected. We estimated the number of individuals who would be affected to be 674,000. This estimate would include those covered under HMSA, Kaiser, and Island care. Of the 674,000, 631,000 would be individuals who have health insurance but do not have coverage for chiropractic care. Another 43,000 would be insured individuals who have limited coverage but who may change their utilization rates if their coverage were to be expanded. It does not include the approximately 40,000 covered by the commercial carriers as they are assumed to have coverage comparable to that proposed by the bills. It also does not include those covered by Medicare, senior plans, Medicaid, CHAMPUS, the active military, and self-insured individuals as they also would not be affected by the mandate.

Percentage using services. The number of people who would use chiropractic services, or the utilization rate for chiropractic services, would be a percentage of those who will be covered. Three different percentages were used based on information provided by HMSA and two other studies: 2 percent, 4 percent, and 5 percent. Two percent is HMSA's current rate of utilization in its chiropractic rider program. The NMCUES found that 4 percent of the population used chiropractic services, and the HSCA sponsored study of the Oahu population found that 5 percent of the people it surveyed used chiropractors regularly.

Average number of visits per year. We used two figures in our projections. Information provided by HMSA shows that members of its rider coverage visit chiropractors an average of 7.3 times a year. The NMCUES study found an average of 8.3 visits per year.

Average radiology claim. HMSA data indicate that 7.5 percent of the visits include charges for radiology and NMCUES found that 6 percent of the visits include charges for X rays. Both of these percentages were used in different scenarios in calculating the impact on the total cost of care.

Estimated charges. HMSA provided information that the average charge for an office visit to a chiropractor in 1986 was \$25.44. HMSA also reported that the average charge for X rays was \$56.48. These charges were found to be comparable to the average charges of chiropractors nationally based on a survey conducted by the American Chiropractic Association in 1986.

Total estimated costs. Table 4.2 presents our calculations on the estimated total cost of mandating coverage for chiropractic services under a conservative use scenario, a moderate use scenario, and a high use scenario.

Table 4.2

Estimated Additional Cost for Coverage of Chiropractic
Under Three Scenarios

	Scenario 1	Scenario 2	Scenario 3
Estimated members without coverage	631,000	631,000	631,000
Rate of utilization	x 2%	x 4%	x 5%
Number of additional users	12,620	25,240	31,550
Ave. no. visits/year	x 7.3	x 8.3	x 8.3
Additional no. of visits	92,126	209,492	261,865
Estimated members with limited coverage		43,000	43,000
Additional utilization rate		x 2%	x 3%
Add. No. of users		860	1,290
Average visit/year		x 8.3	x 8.3
Additional no. of visits		7,138	10,707
Total additional visits	92,126	216,630	272,572
Charge per visit	x \$25.44	x \$25.44	x \$25.44
Additional costs for visits	\$2,344,000	\$5,511,000	\$6,934,000
Total additional visits	92,126	216,630	272,572
Visits with radiology	x 7.5%	x 6.0%	x 7.5%
Total radiology claims	6,909	12,998	20,443
Average charge/claim	x \$56.48	x \$56.48	x \$56.48
Additional cost for rad.	\$ 390,000	\$ 734,000	\$1,155,000
TOTAL COST	<u>\$2,734,000</u>	<u>\$6,245,000</u>	<u>\$8,089,000</u>

In the first scenario, we assumed that those individuals who will become covered by the mandate would have a utilization rate of 2 percent, comparable to the current utilization under the HMSA rider program. The resulting number of users were then assumed to have an average of 7.3 visits per year based on HMSA data. This resulted in a total number of additional visits per year which was multiplied by the current HMSA charges per visit to arrive at the additional costs for visits. Radiology costs were assumed to be associated with 7.5 percent of the chiropractic visits according to the current HMSA rate. The resulting number of radiology claims were multiplied by the average HMSA radiology charge to arrive at the additional cost for radiology. The additional costs for visits and radiology were combined to arrive at the total additional cost per year under this scenario.

In the second scenario, we based our projections on NMCUES utilization data. We increased the utilization rate to 4 percent and also increased the average number of visits from 7.3 to 8.3 per year based on data from the NMCUES. This also meant increasing the utilization of those HMSA members who currently have some chiropractic coverage by 2 percent to the 4 percent NMCUES rate and increasing their frequency of visits per year from the current average of 7.3 to 8.3. The resulting number of total visits was then multiplied by the charges to arrive at the additional cost for visits. We used the NMCUES rate of 6 percent for use of radiology associated with visits. The cost of these additional claims was added to the costs for the additional visits to arrive at the total additional cost per year.

In the third high use scenario, we increased the utilization rate to the 5 percent found by the HSCA study, used a frequency of 8.3 visits per year, and the current HMSA rate of 7.5 percent for radiology claims.

The estimated total cost of chiropractic services per year if insurance coverage for chiropractic care were mandated would range from \$2.7 million under the first conservative use scenario to \$8 million under the high use scenario. Because the nature and extent of any cost offsets could not be determined, they were not included in the calculation.

Analysis of the Proposed Legislation

House Bill No. 343 and Senate Bill No. 1173 would mandate the inclusion of chiropractors as providers in all individual or group hospital or medical service plan contracts. Each contract must reimburse or pay for health services performed by a doctor of chiropractic if the contract provides for reimbursement or payment for such health services performed by a medical doctor or other physician.

The House Committee on Health in its committee report noted that the purpose of the proposed legislation is to "expand the choice of health care available to Hawaii's citizens by mandating the inclusion of chiropractic services in all health care plans offered in the State."

We believe that the proposed legislation will achieve this purpose since it mandates that chiropractors be included as health care providers in all policies. This type of statutory mandate is commonly referred to as an "insurance equality law." If a policy includes health care services that are within the chiropractic scope of practice, the consumer is free to choose a chiropractic provider instead of other authorized health care providers.

Conclusion

Although this study was unable to provide clear cut answers to many questions on the social and financial impact of mandated insurance for chiropractic services,

it did clarify some issues related to costs and benefits. The proposed coverage exceeds what is currently available. The HMSA provides limited chiropractic rider coverage under a group rider program. Kaiser and Island Care have no chiropractic coverage. Commercial insurance carriers provide chiropractic coverage, but they were unable to provide any data on costs or utilization.

Because of limitations in the available data, it is difficult to assess the extent of utilization of chiropractic services or the level of public demand for such services. In addition, the manner in which the marketplace for health insurance operates precludes making a valid assessment of the level of public or employee demand for chiropractic coverage. However, in our interviews, we found no evidence of demand for chiropractic coverage.

There is some evidence that chiropractic manipulation can be effective in the treatment of back pain. However, we found no evidence that the lack of insurance coverage was resulting in inadequate care or in financial hardship for those who utilized chiropractic care. The lack of insurance, however, could act as a barrier to obtaining the treatment of choice.

We were unable to determine whether there would be an increase in the use of chiropractic services although research generally indicates that providing insurance coverage leads to higher use and costs. Since the services are not currently covered, any increased chiropractic utilization that results from mandated coverage would represent increased costs to the three major insurers. It may be that some portion of this chiropractic care will serve as an alternative to medical care with a resulting cost offset, but we are unable to determine what this might be. It is likely that insurers will increase insurance premiums and that the total cost of health care will also increase.

NOTES

Chapter 1

1. New York (State) Subcommittee on Health Insurance, *Health Insurance, Public Policy in New York*, Albany, NY, 1984, p. 6.
2. Pamela J. Farley, *Private Health Insurance in the United States*, Data Preview 23, Rockville, MD, U.S. National Center for Health Services Research and Health Care Technology Assessment, September 1986, pp. 5-6.
3. Robert N. Frumkin, "Health Insurance Trends in Cost Control and Coverage," *Monthly Labor Review*, September, 1986, p. 4.
4. Regina E. Herzlinger and Jeffrey Schwartz, "How companies Tackle Health Care Costs, Part I," *Harvard Business Review*, Vol. 63, July/August 1985, p. 69.
5. Frank S. Swain, Chief Counsel for Advocacy, U.S. Small Business Association, "Statement before the U.S. House Committee on Small Business on 'New Directions for Small Business and Health Care,'" Washington, D.C., May 6, 1987, p. 11.
6. Gerard Tavernier, "Companies Prescribe Major Revisions In Medical Benefits Programs to Cut Soaring Healthcare Costs," *Management Review*, Vol. 72, August 1983, p. 10.
7. Herzlinger, "How Companies Tackle Health Care Costs," p. 72.

Chapter 2

1. John G. Larson, *Mandated Health Insurance Coverage - A Study of Review Mechanism*, Department of Health Administration, Virginia Commonwealth University, 1979.
2. "The Employee Benefit Mandate - Direct Action to Fill the Void," *Risk Management*, May 1987, p. 66.
3. 471 U.S. 724.
4. *Statistical Abstract of the United States*, Washington, D.C. Government Printing Office, 1986, p. 73.
5. "Health Care," *All About Business in Hawaii*, 1987, p. 30.

6. 102 S. Ct. 79.
7. Employment Retirement Income Security Act of 1974, Section 1144(b), (b)(5)(B)(ii).
8. 594 F. Supp. 449.
9. Testimony on Senate Bill 1173 presented by Cenric S. K. Ho, Administrator, Hawaii Public Employees Health Fund, to the Hawaii House Committee on Consumer Protection, March 25, 1987.
10. Hawaii Public Employees Trust Fund, "Employer Contributions and Enrollment," Data as of June 30, 1987.

Chapter 3

1. Merrijoy Kelner et al., *Chiropractors Do They Help?*, Ontario, Canada, Fitzhenry & Whiteside, 1980, pp. 18-22.
2. Matthew J. Brennan, *Demographic and Professional Characteristics of ACA Membership 1986 Annual Survey*, Arlington, Virginia, American Chiropractic Association, December 1986, p. 4.
3. American Chiropractic Association, *Chiropractic State of the Art, 1987-1988*, Arlington, Virginia, 1987, pp. 4-20.
4. John Langone, *Chiropractors, A Consumers Guide*, Reading, Massachusetts, Addison-Wesley, 1982, p. 14.
5. American Chiropractic Association, *Chiropractic State of the Art, 1987-1988*, p. 25.
6. Hawaii, Department of Commerce and Consumer Affairs, *Geographic Report*, Honolulu, June 16, 1987.
7. Chester A. Wilk, et al. v. American Medical Association, et al, No. 76 Civ. 3777 (United States District Court for the Northern District of Illinois, August 27, 1987).
8. Testimony on Senate Bill 1173, submitted by Dr. Bill Pickard, Hawaii State Chiropractic Association, to the Hawaii Senate Committee on Consumer Protection and Commerce, February 25, 1987.
9. Testimony on Senate Bill 1173, submitted by Marvin B. Hall, Hawaii Medical Service Association, to the Hawaii House Committee on Consumer Protection and Commerce, March 25, 1987.

10. Testimony on Senate Bill No. 1173, submitted by Walter W. Y. Chang, M.D., President, Hawaii Medical Association, to the Hawaii House Committee on Consumer Protection and Commerce, dated March 24, 1987.

11. Testimony on Senate Bill 1173, submitted by Harold Hee, Hawaii Business Health Council, to the Hawaii House Committee on Consumer Protection and Commerce, March 25, 1987.

Testimony on Senate Bill 1173, submitted by Pat Dwarte, The Chamber of Commerce of Hawaii, to the Hawaii House Committee on Consumer Protection and Commerce, March 25, 1987.

12. House Standing Committee Report 94 on House Bill 343, H.D. 1, Fourteenth Legislature, 1987, State of Hawaii.

13. House Standing Committee Report 991 on Senate Bill 1173, H.D. 1, Fourteenth Legislature, 1987, State of Hawaii.

Chapter 4

1. American Chiropractic Association, *Chiropractic State of the Art*, 1987-1988, p. 27.

2. Vithalbhair L. Sheladia and Dennis A. Johnston, "Efficacy of Various Chiropractic Treatments, Age Distribution and Incidence of Accident- and Nonaccident-Caused Low Back Pain in Male and Female Patients," *Journal of Manipulative and Physiological Therapeutics*, Vol. 9, No. 4, December 1986, p. 243.

William H. Kirkaldy-Willis and John David Cassidy, "Spinal Manipulation in the Treatment of Low-Back Pain," *Canadian Family Physician*, Vol. 31, March 1985, p. 535.

3. Matthew J. Brennan, *Demographics and Professional Characteristics of ACA Membership 1986 Annual Survey*, Arlington, Virginia, American Chiropractic Association, December 1986, p. 4.

4. Robert H. Mugge, *Visits to Selected Health Care Practitioners United States, 1980*, U.S. Department of Health and Human Services, Series B, Descriptive Report Number 8, February 1986.

5. Hawaii, Department of Planning and Economic Development, *The State of Hawaii Data Book 1985, A Statistical Abstract*, November 1985, p. 90.

6. Hawaii, Department of Planning and Economic Development, *The State of Hawaii Data Book 1986, A Statistical Abstract*, December 1986, p. 89.

7. Barbara Sunderland & Associates, Inc., *A Study of Hawaii Residents' Use of and Attitudes Toward Chiropractic*, September 1986.
8. Jane See White, "The Surprising Swing to Non-Physicians", *Medical Economics*, May 30, 1983.
9. William H. Kirkaldy-Willis and John David Cassidy, "Spinal Manipulation in the Treatment of Low-Back Pain," p. 535.
10. Marjorie R. Johnson et al., "Treatment and Cost of Back or Neck Injury--A Literature Review," *Research Forum*, Spring 1985, pp. 68, 77.
11. Judith G. Greenwood, *Report on Work-Related Back and Neck Injury Cases in West Virginia: Issues Related to Chiropractic and Medical Costs*, West Virginia Workers' Compensation Fund, February 1987, p. 14.
12. Letter from Dr. Herbert H. Davis, M.D., Chairman of AV-MED Health Plan HMO, Miami, Florida to Mark A. Silverman, D.C., Miami, Florida, March 9, 1983.
13. Blue Cross and Blue Shield of Arizona, *The Financial Impact of Chiropractic Benefits on Health Care in Arizona*, February 1987.
14. John Newman, *State Mandated Benefits*, Blue Cross and Blue Shield Association, 1981, p. 57.
15. Letter from E. Paul Barnhart, Consulting Actuary, Saint Louis, Missouri, to Mr. Moshe Myerowitz, D.C., Bangor, Maine, March 11, 1985.
16. House Standing Committee Report No. 94 on House Bill No. 343, H.D. 1, Fourteenth Legislature, 1987, State of Hawaii.