2003

Complementary medicine: Healthcare provider's perceptions and practices

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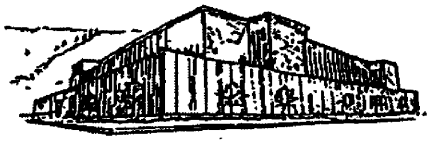

COMPLEMENTARY MEDICINE: HEALTHCARE PROVIDER'S PERCEPTIONS AND PRACTICES

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Presented for partial fulfillment of the requirements
for the degree of
Master of Science

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Missoula, Montana
December 16, 2003

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12-30-03

Date

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Thesis Abstract

Mills, Kathryn Anne, M.S. 2003 **Health and Human Performance**

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Committee Chair: Laura Dybdal, Ph. D

Complementary medicine is a vital part of changes currently emerging in the US healthcare system, yet little data is available on its perception and application by medical professionals. A survey was designed and mailed to a random sample of healthcare providers in the state of Montana in order to determine their perceptions of, use of, training in, and referral rates for complementary medicine. The study also examined if providers are in favor of health insurance coverage and credentialing for complementary medicine practitioners. The sample population included 636 physicians, 67 physician's assistants, and 91 nurse practitioners. Twenty percent of the sample population responded to the survey.

The majority of respondents were physicians (73%), male (66%), between 45-54 years (38%), in private practice (39%), and located in central Montana (38%). Perceptions and attitudes regarding complementary medicine were high yet tended to vary by therapy. The most positive perceptions were reported for biofeedback, massage therapy, nutritional therapies, and relaxation therapies. The personal and clinical use of complementary medicine by respondents was low, with highest frequencies of use reported for massage, nutrition, and relaxation therapies. Provider's level of training in complementary medicine therapies was minimal, yet 67% were interested in future training. High rates of provider referral to complementary medicine practitioners were found, with chronic pain, back problems, and stress topping the list of conditions referred. In general healthcare providers believe that complementary medicine practitioners should be licensed, but there was not agreement in whether health insurance should cover the costs of complementary medicine therapies.

Data collected will assist in determining the interest in future integration, regulation, and health insurance coverage of complementary medicine and will be of use to complementary medicine practitioners, health insurance companies, healthcare providers, policy makers, government officials, public consumers in Montana, and researchers based throughout the nation.

ACKNOWLEDGEMENTS

" To achieve the impossible, it is precisely the unthinkable that must be thought."
- Tom Robbins

"Problems cannot be solved at the same level of awareness that created them."
- Albert Einstein

"At times our own light goes out and is rekindled by a spark from another person. Each of us has cause to think with deep gratitude of those who have lighted the flame within us." – Albert Schweitzer

This thesis is dedicated to all those who have helped me to become the woman I am today, who have loved and supported me through so many of life lessons, and who have kept me honest, strong, and perseverant along my path.

Thank you Dr. Laura Dybdal for being an inspiring and brilliant thesis chair. I hold all the respect in the world for you and could not have gone through this process without your support, guidance, undying optimism, and clear voice. Thank you sincerely.

Thank you Dr. Annie Sondag for being my role model throughout my HHP graduate education. You inspired me to start this program and to stick with it over these last few years. You have my respect and appreciation. I will miss my fellow "blue" person.

Thank you Dr. Cathy Bartels for lending me your time and energy by serving on my thesis committee. Your knowledge of and insights into the fascinating world of Integrative Medicine were invaluable to this project.

Love and Thanks to my wonderfully supportive and caring parents, Aubrey and Rosemary Mills, who have nurtured me through my whole life and have given me many of the opportunities that enabled me to complete this project and to focus on my dreams.

Appreciation and love to my sister and friend, Marguerite, her husband Louis, and my darling nephews, Andrew and Logan Zayas, who are in my heart always.

A world of thanks to my partner, my friend Ray Sherman Vinkey. This graduate school education and thesis process would have been near impossible without you by my side giving me support, love, kindness, encouragement, and constant hands on help.

Thanks to all of my amazing friends. You gave me a shoulder to cry on, a buddy to laugh with, a kind ear to listen, and constant unconditional love to grow with. I especially want to mention these 'angels': Jennifer Hackenbruch, Sabrina Donahue, Jennifer Walters, Margie Cordingley, and Michael Hill. Bless you all.

Alas, thanks to Josh, Nancy, and everyone who gave hands on help with this project.

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CHAPTER I

INTRODUCTION

In the last decade, there has been a growing focus on the varying fields falling under the umbrella term of complementary and alternative medicines. This field encompasses many so called unconventional, natural, or holistic therapies (Easthope et al., 2000). Complementary medicine therapies include a wide spectrum of practices ranging from hypnotherapy, biofeedback, behavioral medicine, and meditation to vitamin therapy, herbal medicine, homeopathy, chiropractic, massage, acupuncture, naturopathic medicine, traditional oriental medicine, and osteopathy (Berman et al., 1998). The accepted working definition of complementary and alternative medicines (CAM) is "interventions neither taught widely in medical schools nor generally available in hospitals, reimbursed by medical insurance companies, or presently considered to be part of conventional medicine (Austin et al., 1998) ".

These defining factors are changing over time as the political and social climates in which they exist alter. Signs of this change include medical schools and hospitals increasingly synthesizing complementary medicine therapies into conventional medicine practices and insurance companies offering benefits for select therapies (Santa Ana, 2001; Wolsko et al., 2002). Terminology is evolving toward complementary or integrative medicine that implies therapies that can be "united with or incorporated into the larger unit" presuming an alliance, not an opposition, between conventional and unconventional medical disciplines (Bell et al., 2002). The term complementary medicine (CM) was used for this study, fitting with a belief in the potential for unity and collaboration between medicines, not competition.

Several studies have shown that complementary medicine use and expenditures in the US have increased dramatically in the last few decades. A national survey found that over 40% of the general public reported the use of complementary medicine within the previous year (Astin et al., 1998). Spending for these therapies is generally not covered by insurance and is paid out-of-pocket by consumers, costing billions annually (Eisenberg, 2001). A momentous study by Eisenberg et al. in 1998 estimated that visits to CM practitioners increased about 47% from 427 to 629 million in the past few years with expenditures well over $27.0 billion. They found that consumer visits to complementary medicine practitioners exceeded total visits to US primary care physicians and out-of-pocket expenditures for complementary medicine rivaled that spent for all US physician services for the year. The enormous demonstration of consumer interest in complementary medicine has put pressure on the healthcare industry to enhance research in this area and improve access to complementary medicine therapies.

The rising use of complementary medicine has produced a definite increase in public attention and is finally gaining health professional interest and acceptance. Various studies have shown that an estimated 60% of physicians have an interest in learning more about complementary medicine (Corbin-Winslow and Shapiro, 2002), while over 60% referred patients to CM therapies (Borkan et al., 1994), and personal use of CM by physicians was up to approximately 41% (Berman et al., 2002). In a study by Astin et al., (1998) about half of surveyed physicians reported to believe in the efficacy of several CM therapies with acupuncture (51%), chiropractic (53%), massage (48%), homeopathy (26%), and herbal approaches (13%) named as effective treatments for a variety of health

problems. This demonstrates a profound increase in use, acceptance, and interest of complementary medicine therapies by healthcare providers.

The surge in both public and professional attraction to complementary medicine may be representative of an emerging shift in the modern healthcare system. Conventional or allopathic medicine, also referred to as biomedicine, has produced dramatic benefits for humanity in emergency care and life saving medicines, procedures, and technologies (Clark, 2000). Yet many people find fault with biomedicine's high costs, bureaucratization, overspecialization, and limited success in dealing with many chronic conditions (Sikand et al., 1998) as well as the problems of its increased reliance on invasive procedures, surgeries, and pharmaceuticals (Druss and Rosenheck, 1998). Even in the presence of such concerns, the public continues to rely on the expertise of physicians and other professionals within the biomedical system for their primary healthcare (Vastag, 2001). Thus, the perceptions and use of complementary medicine therapies by healthcare providers needs to be included in future research and discussions concerning the role of complementary medicine within the healthcare system.

Healthcare providers are influential, not just for patients, but for the healthcare system as a whole. The established allopathic medical community plays a significant role in determining the future of complementary medicine in the United States. Healthcare providers, which include physicians, nurse practitioners, physician's assistants, osteopaths, as well as naturopaths, are the referral agents of the healthcare system. Primary healthcare providers are defined as "individuals who provide primary care services and manage routine health care needs, including referring patients to a specialist for consultation or continued care (JCAHO, 1998) ". These healthcare providers, along

with insurance companies, the pharmaceutical industry, and the federal government can greatly influence the integration of complementary medicine into mainstream medicine.

Attitudes toward complementary medicines by healthcare providers can affect the overall access to and referrals to the public (Berman et al., 1998), which in turn impacts the public's use of these CM therapies (Gordon et al., 1998). Further, insurance coverage for complementary medicine has a strong correlation with the high frequency of public use (Wolsko et al., 2002) and often determines whether there is inclusion of alternative therapies by providers and healthcare systems (Cleary-Guida et al., 2001). Healthcare providers could have a real bearing on the public's health by either encouraging or limiting access to and use of these complementary medicine therapies.

The extent to which healthcare providers and their perceptions may affect public use and integration of complementary medicine into the healthcare system should be investigated. In order to do this, providers in defined regions within the US healthcare system should be studied. Montana, like many other states, is currently undergoing major shifts in managing healthcare systems for its growing population.

The rural western state of Montana has several factors that reflect the national healthcare situation and make Montana an appropriate location for study. These factors include a healthcare provider population that is well distributed with over 2,673 active and instate providers throughout the state (MBME, 2003; MSBN, 2003), a relatively high poverty rate (25%), and an insurance coverage rate (15%) that mirrors the national average (KFF, State Health Facts, 2003). There is currently no data available on the public use of complementary medicine in Montana, yet signs of increased use include the growing number of CM practitioners and reports of increased national usage. A national

study showed complementary medicine use by the public to be significantly higher in the west (44%) as compared to the rest of the United States (Eisenberg et al., 1993). These factors and others make Montana an ideal site for research on healthcare provider interest in and use of complementary medicine.

Healthcare providers have a major role in determining the future of US healthcare on many realms. They may influence whether or not there is use and acceptance of everything from new technologies, drugs, or surgical procedures to the various complementary medicine therapies. Inquiries into Montana healthcare provider's perceptions, use, training levels, and referral of complementary medicine can allow a glimpse into some of the emerging changes in healthcare. This information can aid in defining the potential future of complementary medicine therapies within the healthcare system for this state, nation, and beyond.

Statement of Problem

The widespread public use of complementary medicine is a recent occurrence in the United States, although many of these therapies have been a part of traditional global health care for hundreds of years (NCCAM, 2001). In order to determine what this increased use and burgeoning acceptance means for the varying fields in complementary medicine and for the healthcare system as a whole, more research is necessary. The use and perceptions of CM may vary by state, profession, demographics, and other key factors (Berman et al., 2002; Ernst at al., 1995; Borkan et al., 1994). Recent research has delved into national samples of both the general public and healthcare providers regarding their use and beliefs of complementary medicine, yet little information exists on specific regional provider's use, referral, perception, or training level of these CM

therapies. Research is needed to assist in understanding how complementary medicine may fit into individual states as well as national healthcare systems. Research on the use and perceptions of complementary medicine by a sample of healthcare providers in the rural state of Montana can provide valuable insights on these and multiple other levels.

Healthcare providers can vastly influence the use and accessibility of complementary therapies by the public. These professionals can have tremendous influence on which treatments are included and covered in the mainstream health care system as well as on patient actions or patterns of behavioral change (Kreuter, 2000). Healthcare providers impact many decisions including which treatments are encompassed in the healthcare system, patient treatment protocols, referrals for outside service, acceptance of new technologies and therapies, and health insurance coverage (Clark, 2000). Ultimately, the future direction, regulation, stability, and integration of complementary medicine are affected by these very decisions (Eskinazi, 1998). As public use of complementary medicine grows, research is needed to examine the level of acceptance and use of complementary medicine by these influential healthcare providers within Montana and throughout the US.

Purpose of the Study

The purpose of this study was to investigate healthcare providers reported perceptions, attitudes, use, referral, and training level of complementary medicine in Montana. Healthcare providers included physicians, nurse practitioners, and physician's assistants currently practicing in Montana. This study examined the most common types of complementary medicine therapies currently utilized by the public and/or providers in the US. These complementary therapies included acupuncture, aromatherapy,

biofeedback, chiropractic, herbal medicine, homeopathy, massage therapy, naturopathy, nutritional therapy, and relaxation techniques. Data gathered from Montana healthcare providers may assist in determining the need or interest in future integration of these CM therapies into the healthcare system, ongoing regulatory issues, and health insurance coverage for complementary medicine in this state. Information collected can be of further interest and use to complementary medicine practitioners, health insurance companies, healthcare providers, policy makers, government officials, public consumers in Montana, and researchers based throughout the nation.

Research Questions

This study investigated the following:

I. What were the reported perceptions and attitudes toward acupuncture, aromatherapy, biofeedback, chiropractic, herbal medicines, homeopathy, massage therapy, naturopathy, nutritional therapy, and relaxation techniques by practicing healthcare providers in Montana?

II. What was the reported frequency of professional use and personal use of acupuncture, aromatherapy, biofeedback, chiropractic, herbal medicines, homeopathy, massage therapy, naturopathy, nutritional therapy, and relaxation techniques by practicing healthcare providers in Montana?

III. What was the reported level of training in acupuncture, aromatherapy, biofeedback, chiropractic, herbal medicines, homeopathy, massage therapy, naturopathy, nutritional therapy, and relaxation techniques by practicing healthcare providers in Montana?

IV. What was the reported frequency of, and health conditions considered for, referral to complementary medicine practitioners by healthcare providers in Montana?

Sub-questions

1) What demographic factors including age, gender, practice location, and professional specialty of healthcare providers in Montana were related to reported referral, training level, and belief in licensing and health insurance coverage of complementary medicine therapies?

2) How were the reported beliefs on licensing and regulation and health insurance coverage for complementary medicine therapies by Montana healthcare providers related to their reported referral and training levels of these therapies?
3) What were the reported perceptions of Montana healthcare providers on increased regulation and licensing for non-regulated complementary medicine practitioners and health insurance coverage for complementary medicine therapies?

Delimitations and Limitations of study

Delimitations of the study were as follows:

1) The study looked only at providers currently residing and practicing in the geographical confines of Montana.
2) The data was collected via survey.
3) Demographic data collection was limited to age, gender, geographic location, education, and professional specialty.
4) Survey data was restricted to self-report of respondents.

Limitations of the study were as follows:

1) The accuracy of the study was dependent on the truthfulness of participant responses.
2) The results of the study can only be truly referred to the Montana providers who responded to the survey.
3) The survey instrument used was not proven to be valid or reliable.
4) Survey responses may have varied depending on the accepted or understood definition of complementary medicine and the definitions of individually selected complementary medicine therapies.
5) Response rates to mailing surveys by physicians are commonly and notoriously low (Astin et al., 1998); thus, a potentially low survey return rate could affect overall study results.

Definition of Terms

Acupuncture- an ancient Chinese art that uses inserted needles into points along the meridians, or energy pathways, related to various organs in order to stimulate the flow of chi energy and facilitate the body's own healing mechanisms (Janiger & Goldberg, 1993).

Allopathic Medicine- conventional biomedicine that uses treatments such as surgery and medications to work in opposition to the factor believed to cause the disease or condition. (Mason DJ et al., 2002)

Alternative Medicine- therapies not generally taught in medical schools or used in hospitals that are used instead of conventional medicine (Mason DJ et al., 2002).

Aromatherapy- the ancient use of distilled and concentrated essential plant oils to influence body, mind, and/or spirit (Clark, 2000).

Attitude- the position or behavior of persons expressing thought or feeling (Webster's dictionary, 1998).

Biofeedback- the technique of using equipment (usually electronic) to reveal to individuals some of their internal physiological events, normal and abnormal, in the form of visual and auditory signals to teach them to manipulate these otherwise involuntary or unfelt events by manipulating the displayed signal (NCCAM, 2001).

Chiropractic- the focus on the relationship between structure of the spine and function, and how this affects the preservation and restoration of health, while using manipulation as the primary treatment tool (NCCAM, 2001).

Credentialing- the process of obtaining, verifying, and assessing the qualifications of a health care practitioner to provide patient care services in or for a health care organization which may include a state license (Eisenberg et al., 2002).

Complementary Medicine (CM)- therapies that are not generally taught in medical schools or used in hospitals that are used in addition to conventional medicine (Mason DJ et al., 2002), which include a broad domain of healing resources encompassing all health systems, modalities, practices, and theories other than those intrinsic to the politically dominant health system of a particular society or culture in a given historical period (Sikand & Laken, 1998).

Healthcare Providers- a term used to describe healthcare professionals whose scope of practice includes the ability to diagnose, make patient referrals, and prescribe pharmaceutical drugs (Eisenberg et al., 2001).

Herbal medicine- crude drugs of vegetable origin utilized in the treatment of diseases, often of a chronic nature, or to attain or maintain a condition of improved health (Robbers & Tyler, 2000).

Holistic Health Care- treatment based on the integration of mind, body, and/or spirit that is geared towards the whole person, rather than just the disease or condition. (Mason DJ et al., 2002)

Homeopathy- a system developed in Germany that is based on the principle 'like cures like' and that uses diluted small doses of specifically prepared plant extract and minerals to stimulate the body's defense mechanisms and healing processes in order to treat illness (NCCAM, 2000).

Integrative Medicine- represents a system of care that emphasizes wellness and healing of the entire person (bio-psycho-socio-spiritual dimensions), drawing on both conventional and complementary medicine approaches in the context of a supportive and effective physician-patient relationship (Bell et al., 2002).

Licensing- a legislation-based law granting the right to practice that includes, in the case of providers other than medical doctors, a legislatively designed scope of practice, or the right to offer a specified range of clinical services narrower than medical diagnosis and treatment (Eisenberg et al., 2002).

Massage Therapy-the systematic manipulation of the body tissue to produce beneficial effects on the nervous and muscular systems, local and general circulation, the skin, viscera, and metabolism (Clark, 2000).

Naturopathy- a complete medical system that views disease as being caused by alterations in the processes by which the body naturally heals itself and emphasizes health restoration as well as disease treatment by employing an array of healing practices including diet, homeopathy, acupuncture, herbal medicine, hydrotherapy, counseling, and pharmacology (NCCAM, 2001).

Nutritional therapy- nutritional food-based supplements and concentrations of chemicals designed to prevent and/ or control illness as well as promote health (NCCAM, 2001).

Perceptions- the faculty of perceiving or obtaining knowledge through the senses; observing; understanding (Webster's dictionary, 1998).

Relaxation techniques- therapies designed to decrease anxiety and muscle tension by reducing pulse rate and blood pressure through breathe and focused muscle tension release exercises (Clark, 2002).

CHAPTER II

LITERATURE REVIEW

The Widespread Growth of Complementary Medicine

Across the globe, public interest and use of complementary medicine therapies and products have risen steadily over the last 30 years. In the US it is estimated that one third of the population uses these practices on a regular basis (Eisenberg et al., 1993). In Europe the percent is an even higher (40-70%), while complementary therapy use in Japan is over two thirds of the population (Wolsko et al., 2002). In 1998, Eisenberg et al. estimated that over 43% of Americans have used some form of complementary medicine in the past year and report a likelihood of future usage. Data from a national survey demonstrated that complementary medicine use and expenditures increased substantially between 1990 and 1997, with overall prevalence of use increasing by 25%; total visits by 47%, from 427 to 629 million; and expenditures up by an estimated 45%, to about $27 billion, with at least $12.2 billion paid out-of-pocket (Eisenberg et al., 1998).

Research has shown further trends in the increased use of complementary medicine. Wolsko et al. (2000) found that numbers of people who have seen or plan to see alternative providers are continually growing, with 40% of respondents currently using massage and 63% planning to, 20% using herbs and 55% planning to, 41% using chiropractic and 45% planning to, and 18% using acupuncture with 38% planning to in the near future. Kessler et al. (2001) reported that vast public use of complementary medicine is the result of a secular trend that began half a century ago and now shows over 67% of study respondents having used at least one CM therapy in their lives. Another study found that one in three respondents (34%) reported using at least one

complementary medicine therapy in the past year, the majority using these therapies for chronic, not life-threatening, medical conditions (Eisenberg et al., 1993). These studies demonstrate the immense and continuing growth of complementary medicine.

Though there are many therapies incorporated within complementary medicine, several are more utilized and accepted than others. Austin et al. (1998) surmised that across surveys the CM therapies with the highest physician referral rate were acupuncture (43%), chiropractic (40%), and massage (21%). Both Eisenberg et al. (1993) and Austin et al. (1998) found that US consumers reported most frequent use of five CM therapies: acupuncture, chiropractic, herbal medicine, massage, and homeopathy. And a study by Druss & Rosenheck (1999) delineated the most commonly used unconventional therapies as chiropractic, massage, herbal remedies, nutritional advice, and acupuncture. In a recent study to determine which complementary medicine therapies people would most likely use, the top therapies were massage (80%), vitamin therapy (80%), herbal therapy (75%), and chiropractic (73%)(AMTA, 2002). Biofeedback and relaxation techniques have also had high physician referral, training, and professional use rates across surveys (Corbin-Winslow & Shapiro, 2002; Sikand & Laken, 1998).

There has been some research describing the demographic qualities that are most frequently associated with the public use of complementary medicine. Eisenberg et al. (1993) defined users of CM to be between the ages of 25 to 49, college educated, white, and in a higher income bracket. A later study by Eisenberg et al. (1998) found similar trends, yet use was found to be higher in females (48.9%) than males (37.8%) and user ages rose to between 35 to 49 years. Austin (1998) found several variables to be predictors of complementary

medicine public use: higher education, poorer health status, a holistic orientation to health, and having had conditions of anxiety, back problems, chronic pain, or urinary tract problems.

The reasons reported for consumer use of complementary medicine vary. They seem to revolve around treatment of existing illness and prevention of future illness or maintenance of health and vitality (Eisenberg et al., 1998). Use is also high for chronic conditions that did not respond well to conventional medicine (Consumer Reports, 2000). Eisenberg et al. (2001) found that complementary therapies in general were perceived to be more helpful than conventional medicines for chronic debilitating conditions such as headaches, allergies, fatigue, strains, sprains, arthritis, and neck and back conditions.

Kessler et al. (2001) reported that the consistently growing and pervasive use of complementary medicine for many conditions should dispel any suggestion that use of complementary medicine is a passing fad associated with one particular generation or fringe segment of the population. The attraction of complementary medicine has been related to its advocacy of nature, vitalism, observational based science, and spirituality that allow patients a participatory experience of self-empowerment, especially when illness threatens their connection to the world (Kaptchuk & Eisenberg, 1998). This interest in and use of complementary medicine has tremendous potential for further impacting the already stressed health care system.

Health Care System in Crisis

Surging interest in complementary medicine may be due to many different factors including several underlying problems within the mainstream medical system. Advances in medicine, specifically vaccinations and antibiotic drugs for infectious disease, have resulted in incredible gains for human health, yet the present challenge for biomedicine comes increasingly from chronic and degenerative diseases (NCCAM, 2001). Many consumers may find issue with the fact that the existing system is oriented towards acute care and episodes of illness rather than toward desired health promotion and comprehensive care (Weeks, 1999). The combination of deteriorated patient-physician relationships, high reliance on expensive and invasive technology, and the widespread perception that physicians are more focused on fighting disease than on healing and individual wellness has influenced patients to turn to complementary medicines (Snyderman & Weil, 2002).

The increasing cost of mainstream healthcare alone is enough for many to seek alternative means of care. Conventional health care costs increased by 130% to $1.61 trillion in 1998 from $697 billion in 1990 (AMTA, 2002) and are currently estimated at $1.2 trillion, which is 13.1% of the US Gross Domestic Product (GDP) (Mason et al., 2002). The high cost of medicine is incredibly problematic for many consumers, especially those who are uninsured or underinsured. A recent 2003 Census Bureau survey found that nearly 75 million Americans, one in every three people under age 65, were uninsured for at least part of the last two years (Rovner, 2003). Instead of universal health care, American society provides health insurance for the wealthy, the well organized (unions), and those with political power (veterans) while most of the poor remain

uninsured (Mason et al., 2002). This issue of health insurance is of tremendous importance when looking at problems with healthcare in America, especially newly formed managed care, and the needed changes in many aspects of healthcare delivery (Weeks, 1999).

The reliance on technology, surgery, and pharmaceuticals in the biomedical system may have alienated many people. Dissatisfaction continues to grow among consumers and physicians alike with the heavy reliance on pharmaceuticals and the focus on the attack of specific diseased organs for chronic conditions rather that on healing the whole person (Bell et al., 2002). An overuse and reliance on pharmaceutical drugs can be harmful. Research shows that adverse prescription drug reactions kill an estimated 140,000 Americans and lead to over 30% of all hospitalizations every year (Clark, 2000). In fact, adverse reactions to drugs and other medical procedures are between the fourth and sixth leading causes of death in the US (Relman & Weil, 1999), and malpractice claims against conventional medicine doctors occur more frequently and involve far more serious injury than do claims against CM practitioners (Berman et al., 2000).

However beneficial in many illnesses and situations, technological superiority and increased health costs and spending in the US does not guarantee an effective health care system. The World Health Organization, for example, ranked 191 countries on the basis of organization and performance of their health care systems. While the US ranked first in health system responsiveness and expenditure per capita, it ranked 37th behind many developed and developing nations on fairness of financial contributions across population groups and on level of health achieved in relation to the resources consumed (Mason et

al., 2002). The US may have vast superiority in technology and finances compared to other nations, yet it has not achieved health levels to be expected from such measures.

A Scientific Basis for Complementary Medicine

The growing consumer demand for complementary medicine has added to pressures to study the safety, efficacy, and cost effectiveness of CM practices and products. It has been argued by many that a strong scientific evidence base is needed in complementary medicine for acceptance and inclusion into the healthcare system (Ernst et al., 1999). The concerns that many complementary medicine therapies have not been evaluated using rigorously conducted scientific tests based on the accepted rules of evidence, proper design, or randomized controls is seen as a major deficiency (Fontanarosa & Lundberg, 1998). While it may be true that complementary medicine is lacking a hard scientifically- proven base, it should dually be noted that, contrary to popular belief, studies reveal that less than 30% of allopathic treatments and procedures currently used have been adequately tested (Clark, 2000).

A vital step in bolstering this mandated research base of complementary medicine was the establishment of the Office of Alternative Medicine at the National Institutes of Health in 1992 to facilitate and coordinate research projects (WHCCAMP, 2003). In 1998 Congress enacted legislation to expand this office into the National Center for Complementary and Alternative Medicine (NCCAM), which is mandated to "conduct basic and applied research, research training, and disseminate health information and other programs with respect to identifying, investigating, and validating CM treatments, diagnostic and prevention modalities, disciplines and systems (NCCAM, 2001)". The overall research budget for complementary medicine increased from $116 million in

1999 to $247.6 million in 2002, with the NCCAM directly receiving $104.6 million of that amount (WHCCAMP, 2003). The interest in increasing research for complementary medicine operates from the assumption that each intervention, once tested and proven effective, can be incorporated into conventional care as now practiced (Zollman & Vicker, 1999).

As research in complementary medicine expands, the debate over accepted research methods and lack of proven effectiveness and safety of CM therapies heats up. It is basically an argument between proponents of subjective research against those advocating objective research methods. Many integrative physicians and patients consider experience to be a valuable data source and turn to CM because it works (Relman & Weil, 1999). In a study to determine why patients use complementary health care, Austin (1998) found that the most influential or salient factor in people's decisions to use this form of healthcare is perceived efficacy. This suggests that consumers act primarily by experience (Eisenberg et al., 2001). Basically, if a treatment works to alleviate their symptoms or those of someone they know, then they will seek it out. Even though patients tend to rely mainly on experience as proof for complementary medicine use, the inherent lack of scientific research of complementary medicine remains a barrier of acceptance and use for many healthcare professionals and providers.

Research completed on complementary medicine has linked many health benefits to the use of specific therapies. Consumer satisfaction rates generally have been very high (80-85%) for users of complementary medicine therapies (White et al., 1997). The use of various CM therapies has provided consumers with many health benefits. Biofeedback, for instance, assists with relaxation and has been found useful in treatment of muscle

tension, anxiety, insomnia, depression, fatigue, irritable bowel syndrome, muscle spasms, neck and back pain, high blood pressure, and phobias (Clark, 2000). Eisenberg et al. (1993) found high frequencies of complementary medicine use for various conditions, such as: massage therapy used for back problems and sprains/strains; chiropractic for back problems, arthritis, and headaches; and relaxation techniques for insomnia, headache, high blood pressure, anxiety, and depression.

Perception, Use, & Referral of CM by Healthcare Providers

The barriers that have long divided biomedicine and complementary medicine are beginning to dissipate. Many physicians who once shunned complementary medicine practitioners and deemed them as "quacks" and "charlatans" (Anderson et al., 2000) are now starting to embrace them. The perceptions and attitudes of healthcare providers toward complementary medicine have undergone a positive revision in recent years. Several factors demonstrate this shift toward a more positive perception of complementary medicine therapies by these health professionals. These factors include the increase in healthcare provider's personal and professional use and in their referrals of complementary medicine (Boucher & Lenz, 1998).

The use of complementary medicine therapies by healthcare providers has soared to new heights. Although traditionally opposed to complementary medicine, a recent survey shows that allopathic providers have positive attitudes toward complementary medicine, are making referrals, and are personally using these therapies themselves (Druss & Rosenheck, 1999). According to a study of physicians from diverse specialties, more than 60% recommended CM to patients, 47% reported using CM therapies themselves, and 23% integrated them into their practices (Borkan et al., 1994). Gordon et

al. (1998) found that 93% of primary care physicians and obstetrics-gynecology clinicians had used or recommended to patients at least one CM therapy in the previous 12 months. This study showed that two-thirds of responding physicians expressed moderate interest in using complementary medicine to treat health problems alone or in combination with conventional treatments and 35% were very interested. Nurse practitioners were found to be even more likely (75%) than physicians to be very interested in complementary therapy use (Gordon et al., 1998).

Personal use of complementary medicine therapies by healthcare providers is associated with more favorable attitudes and perceptions toward complementary medicine (Easthope et al., 2000). The frequency of personal use is accelerating with one study showing 42% of surveyed physicians had used CM therapies for themselves, family members, or both (Borkan et al., 1994). Another study found that more than half of respondents had used one or more types of CM, with massage (32%), relaxation techniques (24%), dietary supplements (23%), and chiropractic (16%) reported most frequently (Burg et al., 1998).

Healthcare provider referrals for complementary medicine have risen dramatically over the last decade as consumer use blossoms. In a questionnaire on referrals, Borkan et al. (1994) found more than 60% of all physicians made referrals to CM practitioners at least once in the preceding year and 38% in the preceding month. These referrals were generally based on patient requests, cultural beliefs of patients, failure of conventional treatment, and belief that patients had "nonorganic" or "psychological" disease (Borkan et al., 1994). In another study, at least 50% of responding physicians had referred patients to complementary therapies, with the greatest number being referred to acupuncture,

biofeedback, and massage (Berman et al., 2002). Goldszmidt et al. (1995) found that 59% of physicians surveyed reported referring patients to physicians who practiced alternative treatments and 68% to non-medical practitioners. A study of Denver area physicians found that 48% had referred patients to complementary medicine and 24% had personally used complementary medicine, with this personal use being the factor most associated with referral and recommendation of CM therapies (Corbin-Winslow & Shapiro, 2002). While studies demonstrate a wide spectrum of referral rates to complementary medicine, it is important to note that all show a marked overall increase in referral.

Signs of Integration into the Mainstream Healthcare System

Along with the growing acceptance of complementary medicine in the public and allopathic medical communities, other vital signs point to the further integration of several complementary medicine therapies into mainstream medicine. Such signs include the increased inclusion of complementary medicine therapies both within US hospitals and the curriculum of many US medical schools (Eisenberg, 2001).

Roughly 15% of US hospitals offered complementary medicine therapies in 2000 and this percent is growing each year (Schneider, 2002). In an annual survey of hospitals done in 2001 by the American Hospital Association (AHA), it was found that increased numbers of hospitals offered several complementary medicine therapies including pastoral care (197), massage therapy (159), relaxation therapies (133), guided imagery (107), therapeutic nutrition (103), and biofeedback (97) (Health Forum, 2002). This survey showed that 87% of the hospitals surveyed offered some kind of complementary medical services and those that did not were planning on providing them to patients in the future (Santa Ana, 2001). Primary motivations cited for these provisions included patient

demand, reflection of the hospital mission statement, clinical effectiveness, attraction of new patients, differentiation from competitors, and physician request (Santa Ana, 2001).

There are numerous barriers to the inclusion of complementary medicine in hospitals, such as lack of research and data, reimbursement complexity, and conventional conflict among physicians and other providers (Santa Ana, 2001). However, these barriers may be altered with the expanding repertoire of complementary medicine therapies moving into medical school classrooms. A study by Berman et al. (1998) indicated that acceptance and use of complementary medicines are strongly predicted by a physician's knowledge and attitudes towards a therapy, thus education in these therapies may positively affect perception and use.

Healthcare provider acceptance of complementary medicine may soon explode as more medical schools include therapies in their curriculums. A recent survey by Wetzel et al. (1998) of 117 of the 125 (94%) US medical schools found that 64% reported offering courses on complementary medicine. Of the 123 courses reported, 68% were stand-alone electives and 31% were required courses. Educational formats included lectures, practitioner demonstration, and patient presentations with common topics being chiropractic, acupuncture, homeopathy, herbal therapies, and mind-body techniques (Wetzl et al., 1998). Corbin-Winslow and Shapiro (2002) and others have demonstrated that physicians (60%) are also increasingly requesting to learn more about complementary medicine.

Perpetuation of these therapies into the healthcare system falls under the integrative medicine movement. Central to integrative medicine are the principles of the body's innate ability to heal, a focus on prevention in order to enhance health and well

being, and an emphasis on the patient-physician therapeutic relationship to facilitate the healing process (Maizes & Caspi, 1999). Integrative medicine attempts to meld the best of biomedicine with complementary medicine. This has tremendous possibilities for finding solutions to the current problems in healthcare. Eisenberg et al. (2001) found that 79% of study respondents who had seen a medical doctor and used CM therapies in the previous 12 months perceived the combination to be superior to either one alone. As Astin (1998) concluded from his research, the majority of complementary medicine therapies are used as adjuncts rather than replacements for conventional medicine, with only 4% of Americans using complementary medicine exclusively. CM therapies are moving from being seen as a threat to biomedicine to becoming an integral part of it.

There is a paradigm shift emerging that has the potential to change the face of medicine and healthcare. According to Jeanne Achterberg (1998), for the first time in decades there is evidence that the common ways and means to health are on the verge of revolt. She concludes that the paradigm shift, or revolution in the linear and constrained view of reality, of medicine is fundamentally a crisis of human values. It deals with how we regard and care for one another, ourselves, and all things alive and non-organic in our world. This shift is directed toward integrative medicine. Integrative medicine is a comprehensive primary care system that blends conventional and complementary medicines and emphasizes wellness and healing of the whole person, bio-psycho-socio-spiritual dimensions, above and beyond suppression of a specific somatic disease (Bell et al., 2002). This integration of medicines may be a practical solution to some of the issues emerging within the mainstream healthcare system.

Health Insurance Coverage for Complementary Medicine

Health insurance companies across the nation are responding to the complementary medicine movement by adding some therapies to member benefits. In 2000, 70% of employee sponsored programs covered chiropractic, 17% covered acupuncture, 12% covered massage therapy, and numbers for other complementary medicine services dwindled from there (WHCAMP, 2002). A majority of managed care organizations and insurance providers are beginning to offer some coverage for acupuncture, biofeedback, chiropractic, nutritional counseling, and osteopathy (Pelletier et al., 1997). Cleary-Guida et al. (2001) discovered in a tri-state study, including New York, New Jersey, and Connecticut, that insurance coverage was limited to chiropractic (100%) acupuncture (50%), and massage therapy (minimal coverage).

Several factors seem to determine whether an insurer or health plan covers complementary medicine. These factors delineated by Mason et al. (2002) were clinical efficacy, which includes therapies that have few complaints or side effects and are cost effective; competency, of CM practitioners in relation to their knowledge of a therapy's strengths and limitations and their possession of national standards of training and practice; and finally, market differentiation, which pertains to insurers increased ability to attract enrollees and retain existing enrollee base by providing desired complementary therapies. In the 1998-1999 "Landmark Healthcare Survey," it was found that 85% of HMOs believed that the relationship between complementary and allopathic medical care would continue to grow (Cleary-Guida et al., 2001). When these HMO executives were asked their main motivations for offering complementary medicine therapies in insurance coverage, thirty-eight percent cited legislative mandates, another thirty- eight percent

cited requests from members, eight percent named clinical effectiveness, and none cited lowering costs (Weeks, 1999). Executives, as well as conventional clinicians and managers, are demanding persuasive evidence that complementary medicine can deliver safe and effective treatments that are also cost efficient before they are included in health care or covered by insurance (Zollman & Vickers, 1999).

Health insurance coverage reflects the level of acceptance within mainstream medicine and among the US public. A therapy may be legitimized by its inclusion in health insurance policies. If insurers increasingly reimburse for complementary therapies, patient utilization is likely to increase and revenues are likely to significantly increase (Eisenberg et al., 1998). Wolsko et al. (2002) supported this by demonstrating that insurance coverage exhibited the strongest correlation to high-frequency use of complementary therapies. It has been shown that reimbursement for these therapies will likely increase if there is increased clinical research and scientific proof (Cleary-Guida et al., 2001); as well as increased licensure and judicial acceptance of complementary therapies (Eisenberg et al., 2002).

Credentialing for Complementary Medicine- Nation and State

Credentialing is the process of obtaining, verifying, and assessing the qualifications of a healthcare practitioner to provide patient care services in or for a healthcare organization. Such qualifications may include a state license granting the right to practice and defining a legislatively designed scope of practice (Eisenberg et al., 2002). Recently, the question of licensing complementary medicine practitioners has come into the spotlight. Growth in acceptance of complementary medicine by the public and healthcare providers has led to the heightened interest of policymakers. Storm and

Unutzer (2001) found that states with insurance mandates, regulation of practice, and legislation for complementary medicine practitioners had significant increases in the use of complementary medicine. When surveyed, consumers reported that credentials or licensing is the most important consideration when choosing a CM practitioner (AMTA, 2002). The issue of licensing or regulation for complementary medicine practitioners seems to be of importance to healthcare providers as well, with a study showing that 91% of physicians surveyed felt that CM practitioners should be formally qualified and licensed by law (Perkin et al., 1994).

There was a long history of licensure laws restricting access to complementary medicine therapies. This has been done in part to reduce competition with allopathic physicians and health professionals until recently when most legislative attempts at this restriction were repealed or overturned by courts in response to widespread consumer demand (Anderson et al., 2000). Ultimately, licensure is a political and economic issue within the healthcare industry (Anderson et al., 2000), and larger social forces, such as turf battles between professionals over scope of practice and evolving definitions of mainstream medical care, temper and mediate the entire debate (Eisenberg et al., 2002).

With complementary medicine use on the rise, there may be increased need for organization, collaboration, and potentially the credentialing of practice. Several modalities under the complementary medicine umbrella have reached high levels of acceptance in mainstream healthcare and have secured licensing. Currently, chiropractors are licensed in every state of the US, naturopaths in 11 states (Ernst & Fugh-Berman, 1999), acupuncturists in 42 states and District of Columbia, homeopaths in 3 states (Eisenberg et al., 2002), and massage therapists in 31 states (AMTA, 2002). Homeopathy

and herbal medicines are often not licensed but fall under the scope of practice of naturopaths, acupuncturists, or chiropractors in some states (Ernst & Fugh-Berman, 1999). In Montana there is state licensure for chiropractic, acupuncture, and naturopathy (Eisenberg, 1997) while massage therapy and herbal medicine practitioners are regulated nationally but not state licensed.

The debate over licensing of complementary medicine practitioners encompasses a variety of positive and negative potential outcomes. Increased nationwide standards for licensing and credentialing of complementary medicine practitioners may contribute to increased public trust, practitioner rigor, and legislative integrity, as well as research funding and capabilities. Further benefits may include patient access to safe therapies, facilitation of reimbursement by insurance, physician collaboration and referral, limiting the practice of unqualified CM practitioners, and the needed translation of CM therapies into standardized diagnostic and therapeutic codes for billing that would enable greater establishment in hospital settings (Eisenberg et al., 2002).

Licensing could lead to several negative impacts for complementary medicine practitioners and consumers. Increased complementary medicine licensure could result in excessive standardization for this diverse group, subordination to allopathic physicians, rigid scope of practice boundaries, excessive control on number of visits and lower rate fee schedules, increases in patient volume, decreases in individualized services and time per patient, and perceived decrease in satisfaction by patients and practitioners. An inherent problem for CM practitioners would be that they may lack the resources to establish the needed infrastructure to operate under regulated environments, such as third-party payers and administration requirements, which would violate CM practitioners core

philosophies and beliefs of health (Eisenberg et al., 2002). This debate on potential affects of credentialing will likely continue as more states attempt to regulate complementary medicine therapies.

Case Study of CM Regulation: Massage Therapy in Montana

Massage therapy is an example of one of several complementary medicine therapies currently undergoing dramatic changes in Montana and throughout the nation. Numerous states have recently passed laws and regulations on massage therapy. Currently 30 states, the District of Columbia, and two Canadian provinces require some type of credentials for professional massage therapists, usually licensure or certification (AMTA, 2002). Currently, nine other states including Montana are preparing for state licensure of massage therapists (Lemire, 2003). A bill to license massage therapists in order to provide standards of qualifications, define scope of practice, and regulate therapists through a governing board was proposed for Montana in this year's 2003 legislative session, yet it failed to pass (AMTA, 2002).

There are currently no formal regulations for massage therapists in Montana. It has been argued that without standards in place, educational backgrounds for therapists vary considerably and consumers could be at risk without guidelines for determining who is qualified to safely practice massage (Lemire, 2003). The Montana Chapter of the American Massagé Therapy Association stated the benefits of state licensure as public protection, defining the scope of practice, greater credibility and public confidence, and prevention of the patchwork of local government licensing for cities and counties (AMTA, 2002).

There were several specific regulations, guidelines, and laws proposed in the bill that would constitute legal licensing of massage therapists in Montana. Qualification mandates entry-level requirements of 500 hours of education and passing the National Certification Exam and licensure renewal every year with 12 hours of continuing education (Lemire, 2003). Also included was a 'grandfather clause' that allows practitioners with 5 years continuous professional experience to be exempt and provides a 2-year grace period for existing practitioners to meet requirements (Lemire, 2003).

Data from an unpublished 2001 AMTA survey of Montana massage therapists showed overwhelming massage therapist support for legislation (AMTA Montana chapter survey, 2001). Over 257 of the 300 professional (115 polled) and associate (142 polled) AMTA Montana chapter members were surveyed prior to construction of the legislative bill. Members responded yes (75%) to a belief that state regulation is necessary, citing the philosophy that regulation protects the public from harm (87%) as the main reasoning behind positive responses. There was a strong belief that regulation would legitimize the image of the massage profession (84% of professional members; 81% of associate members).

Through this statewide survey, massage therapists were given the opportunity to provide input on many issues within the legislative process. Specific requirements for licensing, such as minimum hours of educational training and yearly continuing education hours, were discussed thoroughly. This process of seeking professional cohesiveness will continue as future bills are proposed for legislation in Montana and in many other states.

CHAPTER III

METHODOLOGY

The purpose of this study was to investigate the reported perceptions, attitudes, use, level of training, and referral of complementary medicine by healthcare providers in the state of Montana. Demographic characteristics of providers as they relate to these variables were examined. This study also investigated provider perceptions and beliefs about healthcare coverage and credentialing of complementary medicine practitioners.

Sample Selection

The target population of this study consisted of active healthcare providers in the state of Montana. Healthcare providers included allopathic physicians, nurse practitioners (NPs), and physician's assistants (PAs) currently practicing in Montana. Healthcare providers were excluded if they practice outside Montana or were no longer practicing medicine. The population of Montana active, instate physicians is 2,118 (MBME, 2003); active, instate physicians assistant's population is 222 (MBME, 2003); and active, instate nurse practitioners number 304 (MSBN, 2003), totaling 2644 providers in Montana.

The study goal was to randomly select and survey 30 percent of each professional population, or 636 physicians, 67 physicians assistants, and 91 nurse practitioners within this total population of providers. The total number of Montana healthcare providers surveyed was 794. The target response rate was set at 30 percent for the survey return.

A sample of healthcare providers was randomly selected from statewide lists obtained from the Montana Board of Medical Examiners and the Montana State Board of Nursing. These are complete resources, as all physicians, physician's assistants, and nurse practitioners in Montana are registered with these boards and included in the state

governmental listing. Requests were made for providers name, address, degree, and specialty information. The three separate lists of active providers were sent on disc in an excel program format from the state boards to the UM researchers. Excel lists were transferred into the SPSS statistical program database and a stratified random sample of each separate provider list was run through the computer generated selection process. The randomly selected names and addresses of healthcare providers were printed onto labels for placement on each mailing envelope.

Research Design

This descriptive study explored the reported perceptions, attitudes, use, referral, and level of training of select therapies of complementary medicine by healthcare providers in Montana. For the purposes of triangulation and expansion of findings, quantitative and qualitative data was collected via survey. A stratified random sample of practicing, instate Montana healthcare providers were each sent a survey envelope.

Instrumentation

The instrument (see Appendix A, p. 108) was a survey questionnaire adapted from Easthope, Tranter, & Gill's (2000) "General Practitioners Attitudes towards Complementary Therapies". This survey instrument, used in a previous regional study, solicited quantitative data regarding self-reported perceptions, attitudes, personal and professional use, training level, and referral of select complementary medicine therapies from healthcare provider respondents. This survey was used in order to provide instrument's internal reliability and validity.

The selection of complementary medicine therapies was based on research that pin- pointed therapies with high public and provider use. The CM therapies included

were (in alphabetical order): acupuncture, aromatherapy, biofeedback, chiropractic, herbal medicine, homeopathy, massage therapy, naturopathy, nutritional therapy, and relaxation techniques. In addition, there were two open-ended, qualitative questions concerning healthcare provider perceptions on health insurance coverage and regulation or credentialing for complementary medicine practitioners.

Respondents marked their responses to questions by 1) checking all items that apply or, 2) checking items based on a 5-point Likert scale or, 3) checking categorical items or, 4) by answering written qualitative responses. Provider's perceptions and use of complementary medicines were measured using a modified version of an attitudinal Likert scale developed by Visser and Peters (1990). Participants were asked to respond on a 5-point scale (1=Strongly agree, 2=Agree, 3=Uncertain, 4=Disagree, 5=Strongly disagree OR 1=High, 2=Moderate, 3= Uncertain, 4=Low, 5=None) to given statements. Reliability of this scale was assessed to be high in that study by a Cronbach's alpha coefficient, set at .05 (Easthope et al., 2000).

Data Collection

Once permission from The University of Montana Institutional Review Board was secured (see Appendix B, p.115), a letter (see Appendix C, p. 116) and survey were disseminated to the random sample of Montana healthcare providers. The names of healthcare providers were randomly chosen from three separate lists, two lists from the Montana Board of Medical Examiners (physicians and physician's assistants) and one list from the Montana State Board of Nursing (nurse practitioners). The provider addressed mailing envelope included a cover letter stating the study's purpose and giving instructions for completion, a list of the included complementary therapy definitions, the

survey instrument, a pre-addressed and stamped return envelope, and a separate pre-addressed and stamped post card for study results requests. The pre-addressed and stamped postcard was included in the mailing envelope to allow the survey respondent to indicate, by checking a box, filling in their name and address, and sending the postcard back, if they wanted a summary of study results sent to them. Each individual survey was encoded with a number to ensure that no name was associated with the completed survey questionnaire. A database was created and maintained to track respondent's feedback and response rate.

Several steps were taken to keep costs low and ensure an adequate survey return rate. Austin et al. (1998) suggested that in order to assure a better return rate when studying physicians, study surveys should be condensed into a brief questionnaire that is easy to read and understand. As suggested, there was a stressed academic origin, assured anonymity, a large sample size, and a single mailing. Reminder postcards were mailed to a random selection of the non-responding survey recipients from the sample population within four weeks of the initial mailing, as response rate was significantly lower than the goal (30%). To keep track of non-respondents a discrete number code corresponding to a list of names of each randomly selected healthcare provider was written on each survey. As surveys were received at the Health and Human Performance Department office, the survey number code was matched to the number by the provider name on the master list and checked off. The list was destroyed after the reminder postcard mailing and the received surveys were collected for staggered data entry. These factors aided in offsetting mailing costs and the notoriously low mailing response rate typical for physician surveys.

Data Analysis

Once completed, the surveys were returned to the Health and Human Performance Department office (Room 106B; McGill Hall) at The University of Montana for coding and analysis. Data was analyzed with the use of SPSS (a statistical analysis program) software. Survey data was entered into an SPSS format data file and descriptive statistics were run in order to analyze and report frequency distributions. Cross-tabulations were generated to compare the frequency of responses to other responses and to various demographic factors of Montana healthcare providers. The data analysis included descriptive statistics and chi-square tests. The purpose of each of these statistical tests was as follows:

1) Descriptive statistics were used to report frequency findings and percentages of usage, perceptions, attitudes, level of training, and referral rates of complementary medicine among Montana providers. Cross-tabulations of frequencies were run to describe relationship patterns between factors. Level of importance for frequencies was set at $\geq 15\%$.
2) Pearson chi square tests were formed into contingency tables to see if various sets of two variables are independent of one another, or if one variable is contingent on the other. This test was applied to variables to assess whether differences in proportions of each variable were important. The P value of importance was set at .05. This will show the level of consistency and importance between different variable percentages found and the percentage that is expected by chance.

CHAPTER IV

RESULTS

The purpose of this study was to describe the reported perceptions, attitudes, use, referral, and training level of complementary medicine by healthcare providers in Montana. Information for this descriptive study was gathered through a mail survey. Sample population demographic factors of degree, gender, age, practice location, years in practice, and county of practice were obtained. In addition, Montana healthcare provider's beliefs about licensing and health insurance coverage for complementary medicine therapies were explored.

Survey Results

The healthcare providers of Montana were comprised of three succinct groups: physicians, physician's assistants, and nurse practitioners. A random sample from each healthcare provider group was selected and each participant was sent a survey envelope containing an introduction letter, definition page, survey, and a results reply postcard. Envelopes were mailed out to 30% (n= 794) of the total 2003 Montana healthcare provider population of 2,644. A total of 636 (N=2118) surveys were sent to physicians, 67 (N=222) surveys were sent to physician assistants, and 91 (N=304) were sent to nurse practitioners. A random selection of 400 non-responding healthcare providers within the sample population was sent reminder postcards four weeks post initial mailing.

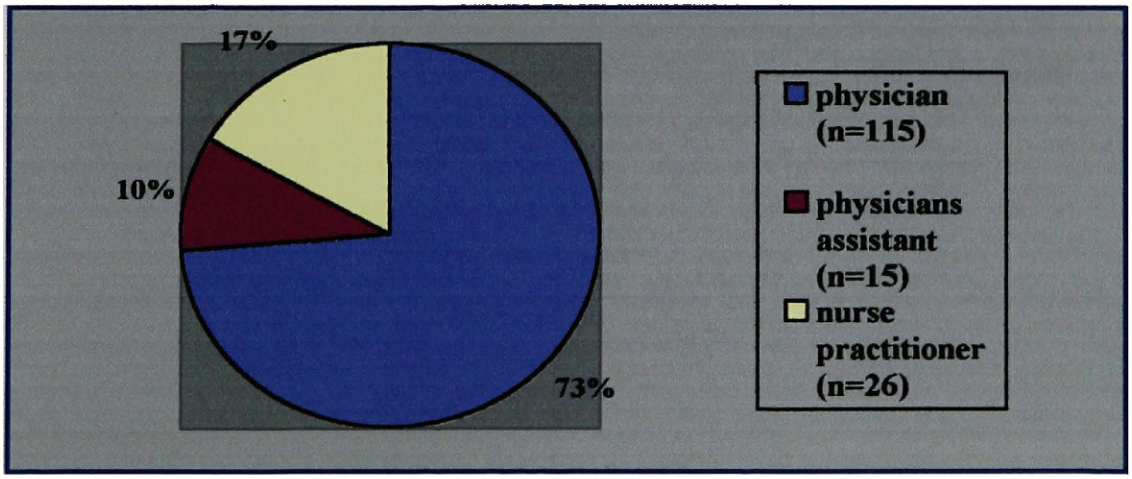
Statistical procedures were run on the data gathered from the sample population of healthcare providers. Descriptive frequencies were used to express the occurrence of percentages reported by providers for each question. Cross-tabulations were computed to compare provider's responses and demographic factors. Finally, contingency tables were

created and chi-square tests applied to variables to assess whether differences in proportions of each variable were important and consistent. Results are recorded below and listed under related topics within the survey. Important differences in chi-square values ($p < .05$) and frequencies ($\geq 15\%$) will be noted in proximity to reported results.

Demographic Information

A total of 794 survey envelopes were mailed out to healthcare providers in the sample population. Of these, 156 surveys were returned for a return rate of 20%. Four of these respondents failed to complete the full survey, including only demographic data. Thus the sample population for demographics is 156, yet for the remaining survey results these four respondents were removed, leaving a sample population of 152. The total of physicians responding was 115, or 18% of the sample population of physicians. Physician's assistant respondents totaled 15, or 22% of the sample population of PAs. Nurse practitioner respondents totaled 26, or 29% of the sample population for NPs. For a summary of responding provider's (n=156) degree classifications see Chart 1.

Chart 1. Responding Healthcare Provider's Degree Classification



In addition, healthcare provider respondents returned pre-stamped and addressed postcards indicating their interest in receiving a summary of completed study results.

There were 794 individual 'results postcards' mailed out in each of the survey envelopes and 114 were returned. Seventy-nine percent of these, or 90 respondents, requested a summary of final study results and 24 (21%) declined.

Age, Gender, & Practice

Demographic findings included the sample population's (n=156) reported age, gender, location of medical practice, and years spent in practice. All participants reported to be active, full-time healthcare providers residing and practicing in Montana, except for four respondents who reported to be recently retired and did not complete the full survey. Demographic information reported by providers included age, gender, and practice years and location. Results of demographic data follow:

1) Sixty- six percent of the healthcare provider respondents were male (103) and 34% (53) were female. Results showed that the degree held by responding providers was dependent on reported gender and differences were consistent and important ($\chi^2 = 51.81$; p= .001; frequency >15%) (see Table 1).

Table 1. Cross-tabulation: of Provider's Degree Classification & Gender

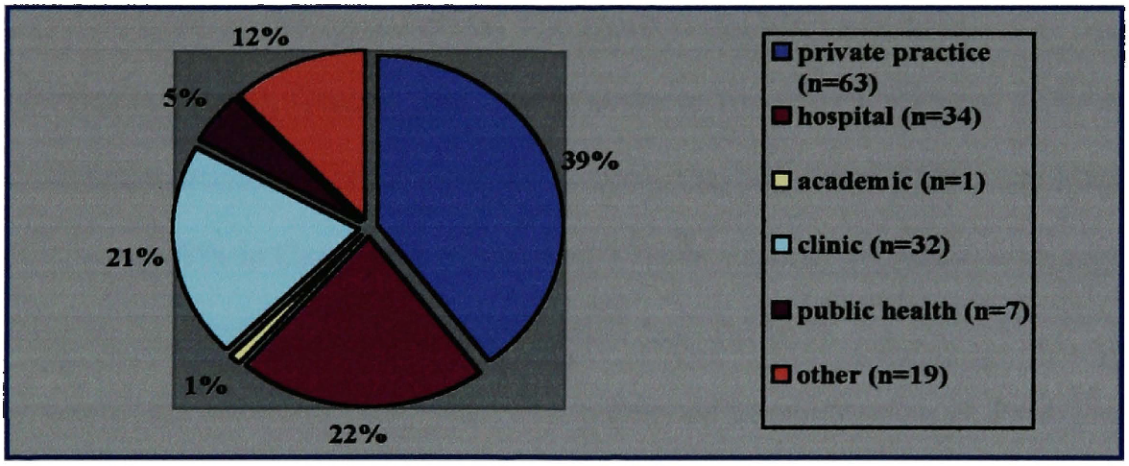
[redacted]	Male	Female
Physicians (n=115)	81%	19%
Nurse Practitioners (n=26)	8%	92%
Physicians Assistants (n=15)	53%	47%

2) The majority (38%) of participants reported to be in the age category of 45-54 years, with 7% under 35 years, 24% between 35-44 years, 21% between the ages of 55-64, and 10% over 65 years.

3) Respondents reported years in medical practice ranged from 1 to 53 years, with the average healthcare provider in our sample reporting an estimated 20 years in medical practice.

4) Practice locations of Montana healthcare provider respondents were categorized into private practice, hospital- based, clinics, public health, academic settings, and other locations (included: hospice, emergency medicine). The majority (39%) of responding healthcare providers reported to be in private practice (see Chart 2).

Chart 2. Montana Healthcare Provider's Practice Location



Responding healthcare provider's practice setting locations were dependent on reported degree classifications and differences were found to be important and consistent ($\chi^2 = 32.57$; $p < .001$; frequency= >15%).

Table 2. Cross-tabulation: Providers Degree Classification & Practice Setting

	Private Practice	Hospital	Academic	Clinic	Public Health	Other
Physician	**47%**	24%	-----	15%	3%	11%
Nurse Practitioner	12%	8%	4%	**42%**	15%	19%
Physicians Assistant	**40%**	27%		27%		7%

** Note: Majority percentages for each provider degree classification were bolded.*

Location of Practice in Montana

Demographics of healthcare providers included the Montana counties in which respondents conducted their medical practices. Healthcare provider respondents listed their county or city of practice on the survey and researchers number coded and categorized each response to represent individual Montana counties. There are currently 56 total counties in Montana. See Appendix G (p. 124) for a detailed map of Montana counties and major cities located within the boundaries of each.

Of the 56 total Montana counties, 55% or 31 counties were represented by the practice locations of respondents. The represented Montana counties of practice were divided into West, Central, and East in order to investigate regional differences in healthcare provider responses. Of all responding providers, 32% were located in Western Montana, 38% in Central Montana, and 30% in Eastern Montana, with regions of practice varying by provider's degree classification (see Table 3).

Table 3. Cross-tabulation: Provider's Degree Classification & Practice Locations

	Western Montana	Central Montana	Eastern Montana
Physicians	31%	**40%**	29%
Nurse Practitioners	**38%**	31%	31%
Physicians Assistants	27%	33%	**40%**

** Note: Majority percentages for providers in each region are bolded.*

Montana as a whole is considered to be a rural state. There are urban hubs, or cities, located within the boundaries of several counties. It is difficult to categorize respondents into rural or urban locations of practice, as specific locations within each reported county were not disclosed for purposes of respondent anonymity. A list of Montana counties that correspond to respondent's practice location was compiled and frequencies of health provider response were reported for each (see Table 4, p.42).

Table 4. Montana Counties of Provider's Practice Location

Number	Montana county	Frequency	Percent
1	Lincoln	1	1%
2	Flathead	8	5%
3	Sanders	2	1%
4	Lake	4	3%
5	Mineral	1	1%
6	Missoula	20	13%
7	Ravalli	6	4%
8	Glacier	3	2%
9	Lewis & Clark	15	10%
10	Powell	1	1%
11	Deer Lodge	1	1%
12	Silver Bow	3	2%
13	Madison	2	1%
14	Toole	1	1%
15	Chouteau	1	1%
16	Cascade	11	7%
17	Gallatin	20	13%
18	Hill	3	2%
19	Fergus	2	1%
20	Wheatland	1	1%
21	Park	2	2%
22	Stillwater	1	1%
23	Yellowstone	32	21%
24	Valley	2	2%
25	Big Horn	3	2%
26	Roosevelt	3	2%
27	Richland	1	1%
28	Dawson	1	1%
29	Custer	3	2%
30	Fallon	1	1%
31	Carter	1	1%
Total	----------	156	100.0

The Montana counties (and main cities within county borders) with the highest survey return rates were (in rank order): 1) Yellowstone (Billings), 2) Gallatin (Bozeman), and 3) Missoula (Missoula).

Survey Results for Research Questions

There were four main questions and two sub-questions forming the base of this descriptive study. Research questions involved healthcare provider's perceptions and attitudes, use, training level, and referral of complementary medicine. Sub-questions focused on the topics of licensing and regulation and health insurance coverage for complementary medicines. This section organizes healthcare providers (n=152) survey responses into result topics related to each of these apriori research questions. Frequency and chi-square findings of importance and consistency will be reported.

Perceptions and Attitudes

Healthcare providers perceptions and attitudes towards complementary medicine therapies were measured by multiple factors. Participants were asked questions on general perceptions and attitudes towards complementary medicine as well as questions related to specific complementary medicine therapies.

Perceptions & Attitudes of CM Therapies in General

General perceptions and attitudes towards complementary medicine were extrapolated from such factors as, whether providers believe "CM therapies have methods that could benefit conventional medicine", and whether "CM therapies should eventually be integrated into the conventional medical system". Respondent's degree classification was compared with responses on the above factors in order to describe a set of perceptions of complementary medicine among providers. Results and level of importance for each comparison on the above factors follow.

Healthcare providers reported on "whether CM therapies have methods from which conventional medicine could benefit". Provider's reported beliefs of CM therapies

benefits were dependent on their degree and gender. Differences in responses to this statement were found to be important and consistent for degree ($\chi^2 = 16.21$; $p = .039$; frequency >15%) and for gender ($\chi^2 = 25.26$; p= <.0001; frequency > 15%). The majority of physicians (65%), NPs (85%), and PAs (80%) "strongly agreed" or "agreed" in CM therapy benefits to conventional medicine (see Table 5).

Table 5. Cross-tabulation: Provider's Degree & Gender with Belief in CM Benefits

		Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
Gender	**Male**	6	52	28	11	3
	Female	25	67	8	0	0
Degree	**Physicians**	9	56	24	9	2
	Nurse Practitioners	31	54	15	0	0
	Physicians Assistants	7	72	7	7	7

Furthermore, providers reported interest in the future integration of CM therapies into mainstream medicine was found to be dependent on provider's degree and gender. Differences in respondent's interest in integration for complementary medicine were found to be important and consistent for degree ($\chi^2 = 24.07$; $p = .002$; frequency >15%) and gender ($\chi^2 = 25.95$; p < .0001; frequency >15%) (see Table 6).

Table 6. Cross-tabulation: Provider's Degree & Gender with Interest in Integration

		Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
Gender	**Male**	5	26	47	18	4
	Female	21	50	25	2	2
Degree	**Physicians**	5	35	41	17	2
	Nurse Practitioners	27	38	31	0	4
	Physicians Assistants	20	27	40	0	13

These and other survey questions were designed to measure healthcare providers (n=152) general perceptions and attitudes towards complementary medicine(see Table 7).

Table 7. Perceptions of Complementary Medicine by Healthcare Providers

Complementary Medicine	**Percentages of Providers that.....**				
Perception/Attitudes Statements	**Strongly Agree**	**Agree**	**Uncertain**	**Disagree**	**Strongly Disagree**
Stimulate body's natural healing mechanisms	7%	41%	30%	18%	4%
Have methods that could benefit conventional medicine	13%	57%	21%	7%	2%
Are useful supplements to conventional medicine	12%	53%	20%	13%	2%
More useful than biomedicine for treating some conditions	7%	28%	34%	23%	8%
Are useful at treating patient's chronic health conditions	7%	46%	29%	16%	2%
Are a threat to public health and to patients who use them	2%	13%	20%	51%	14%
Have not been adequately tested by scientific trials	40%	41%	12%	5%	2%
Require more rigorous research before used or recommended	30%	36%	13%	18%	3%
Are safer to use than many pharmaceutical drug options	5%	40%	32%	18%	5%
Efficacy & safety demonstrated well enough for use	1%	13%	34%	38%	14%
Should be administered only by medical personnel	7%	37%	33%	22%	1%
Work largely because of time spent with patient	4%	40%	42%	13%	1%
Demonstrated effects primarily due to placebo effects	6%	32%	40%	20%	2%
Being used by increasing #s of providers in practice	7%	56%	28%	8%	1%
Being used by increasing #s of patients in past year	12%	53%	22%	12%	1%
Used by patients as supplement to conventional medicine	11%	78%	8%	3%	0
Should eventually be integrated into medical system	11%	34%	39%	13%	3%
Are of little or no interest to me or my patients	5%	12%	14%	51%	18%

Provider's responses to perceptions and attitude survey questions towards complementary medicine therapies showed a variety of results. Statements with the highest frequency of "strongly agree" and "agree" responses included: CM therapies... 'are used by patients as a supplement to conventional medicine (89%)', 'have not been adequately tested by scientific trails (81%)', and 'require more rigorous research (66%)'. Perception and attitude statements with the highest frequency of provider responses of "disagree" and "strongly disagree" included "CM therapies..."are of little to no interest to me or my patients" (69%), "are a threat to public health"(65%), and "efficacy and safety have been demonstrated" (52%). Healthcare provider interest in and acceptance of complementary medicine therapies seems to be high yet the majority of respondents believe scientific research is still inadequate for these complementary medicine therapies.

Perceptions & Attitudes towards Specific CM Therapies

Healthcare provider perceptions and attitudes towards 'specific complementary medicine therapies' were analyzed using frequency distributions and cross-tabulations. Perception and attitude measures were based on provider's reported response to the following statements: "beliefs in the therapeutic value of specific CM therapies", "beliefs in the level of safety of specific CM therapies", and on respondent's "interest in integrating each CM therapy into practice".

Healthcare providers reported their beliefs of therapeutic value for specific CM therapies. The largest frequency of "high" to "moderate" responses for reported belief in therapeutic value were given for massage therapy (76%); with acupuncture and relaxation therapies tied at a 73%, and biofeedback with 72%. The highest frequencies of "low" to

"none" responses for belief of therapeutic value were given for the following: aromatherapy (66%), homeopathy (48%), and naturopathy (37%) (see Table 8).

Table 8. Perceptions-Level of Belief in Therapeutic Value of CMTs

CM therapy	% High	% Moderate	% Uncertain	% Low	% None
Acupuncture	16	57	16	9	2
Aromatherapy	1	8	25	38	28
Biofeedback	19	53	17	10	1
Chiropractic	11	50	15	19	5
Herbal Med.	8	31	34	20	7
Homeopathy	3	12	37	28	20
Massage	25	51	8	10	6
Naturopathy	7	23	33	23	14
Nutrition	23	40	23	10	4
Relaxation	23	50	16	7	4

Healthcare providers reported their beliefs of the level of safety for specific CM therapies. The largest frequencies of "high" or "moderate" provider responses for beliefs in levels of safety of CM therapies were for: massage therapy (93%), biofeedback (88%), and relaxation therapies (87%). Highest frequencies of "low" to "none" responses for beliefs in levels of safety of CM therapies fell to herbal medicines (29%), chiropractic (20%), and homeopathy (19%)(see Table 9).

Table 9. Perceptions- Belief in Level of Safety for CM Therapies

CM therapy	% High	% Moderate	% Uncertain	% Low	% None
Acupuncture	41	43	11	5	0
Aromatherapy	51	18	23	5	3
Biofeedback	60	28	9	2	1
Chiropractic	9	51	20	17	3
Herbal Med.	9	26	36	26	3
Homeopathy	20	18	43	14	5
Massage	57	36	5	1	1
Naturopathy	13	24	49	11	3
Nutrition	28	42	24	5	1
Relaxation	63	24	9	3	1

Lastly, provider's reported their interest in the integration of specific complementary medicine therapies into conventional medicine. Results generally showed a low level of interest in integrating CM therapies into conventional medicine. High frequencies of "high" to "moderate" responses for provider's interest in integration of CM therapies were reported for the following: nutrition (47%), relaxation therapies (45%), and biofeedback (43%). High frequencies of "low" to "none" responses for provider's interest in integration were shown for the following CM therapies: aromatherapy (81%), homeopathy (74%), naturopathy (68%), and chiropractic (67%) (see Table 10).

Table 10. Perceptions- Interest in Integrating CM Therapies

CM therapy	% High	% Moderate	% Uncertain	% Low	% None
Acupuncture	14	21	6	14	45
Aromatherapy	6	6	7	17	64
Biofeedback	12	31	3	14	40
Chiropractic	9	15	9	17	50
Herbal Med.	14	25	7	15	39
Homeopathy	5	10	11	11	63
Massage	14	24	10	15	37
Naturopathy	9	11	12	12	56
Nutrition	19	28	9	16	28
Relaxation	16	29	8	14	33

Use of Complementary Medicine By Healthcare Providers

This study described the reported use, both personal and clinical, of complementary medicine by healthcare providers. Personal and clinical use was measured by providers (n=152) reports of frequency in using specific CM therapies. Healthcare providers also reported their "beliefs about patient's use of complementary medicine" and " belief that complementary medicine was used as a supplement by

patients to conventional care". Reported frequencies follow for healthcare provider's personal and clinical use of complementary medicine therapies.

Personal Use of Complementary Medicine Therapies

Healthcare provider's reports of personal use of complementary medicine therapies were compiled. Responding provider's personal use of CM therapies was generally found to be low (see Table 11).

Table 11. Personal Use of Complementary Medicine Therapies

Complementary Therapies	% High	% Moderate	% Uncertain	% Low	% None
Acupuncture	3	9	1	10	77
Aromatherapy	1	5	1	12	81
Biofeedback	0	10	2	12	76
Chiropractic	5	9	2	14	70
Herbal Medicine	3	12	2	24	59
Homeopathy	1	1	1	10	87
Massage therapy	12	25	1	15	47
Naturopathy	2	1	3	10	84
Nutritional therapy	10	24	2	17	47
Relaxation therapy	7	22	3	13	55

The top three CM therapies to have "high" or "moderate" reports of personal use by responding healthcare providers were: massage therapy (37%), nutritional therapy (34%), and relaxation therapy (29%). Complementary medicine therapies with the highest frequencies of "low" to "none" reports of personal use by providers were: homeopathy (97%), naturopathy (94%), aromatherapy (93%), and biofeedback (88%).

Clinical Use of complementary medicine

Healthcare provider reports of clinical, or professional, use of specific complementary medicine therapies were studied. This was done in order to investigate inclusion of CM therapies in provider's medical practice. Reports of clinical use of

complementary medicine therapies by responding healthcare providers were found to be low for all CM therapies (see Table 12).

Table 12. Clinical Use of Complementary Medicine Therapies

Complementary Therapies	% High	% Moderate	% Uncertain	% Low	% None
Acupuncture	1	5	1	27	66
Aromatherapy	0	2	0	9	89
Biofeedback	0	13	3	27	57
Chiropractic	3	15	3	25	54
Herbal Medicine	1	13	4	30	52
Homeopathy	0	1	1	10	88
Massage therapy	5	17	6	25	47
Naturopathy	1	4	1	12	82
Nutritional therapy	8	23	2	24	43
Relaxation therapy	4	19	3	24	50

Healthcare provider's responses of "high" to "moderate" clinical use were most frequently reported for nutritional therapy (31%), relaxation therapy (23%), massage therapy (22%) and chiropractic (18%). Highest frequencies of "low" to none" provider reports of clinical use of CM therapies were for the following: homeopathy (98%), aromatherapy (98%), naturopathy (94%), and acupuncture (93%). To note, these results of clinical use did not correspond to previously reported perceptions showing a majority (63%)of respondents "strongly agreed" or "agreed" with the belief that increasing numbers of healthcare providers are using complementary medicine in practice.

Provider Beliefs of Patient's Use

Two separate survey questions were used to determine responding healthcare provider's perceptions on their patient's use of complementary medicine. Firstly, provider's reported beliefs on whether "patient use of complementary medicine therapies has increased over the past year" brought the following responses: 12% strongly agreed,

53% agreed, 22% were uncertain, 12% disagreed, and 1% strongly disagreed. The majority of responding providers (65%) " strongly agreed" or "agreed" that patients had been using increasing amounts of CM therapies in the past year. Secondly, healthcare providers were asked whether they believed "patients were using complementary medicine therapies as a supplement to conventional medicine". Responses were: 11% strongly agreed, 78% agreed, 8% were uncertain, and 3% disagreed. The majority of healthcare providers (89%) "strongly agreed" or "agreed" that patients who use CM therapies do so as a supplement to conventional medicines.

Level of Training

Healthcare providers were asked to report on factors demonstrating their level of training in complementary medicine. Factors included: "frequency of complementary medicine therapy training in initial medical schooling", "frequency of training in specific complementary medicine therapies in medical school or through continuing education units (CEUs)", and desire for and "perceived value of receiving future training in specific complementary medicine therapies". In general, the frequency of provider's reported training of complementary medicine therapies in medical school was low (see Table 13).

Table 13. Provider's Training of CM Therapies in Medical School

Initial CM therapy training?	Frequency	%
Yes	22	15%
No	130	85%

Level of training in medical school varied between provider's reported degree and age. A comparison between provider degree classification and training levels revealed that 12% of physicians, 23% of nurse practitioners, and 20% of physician's assistants

reporting training in complementary medicine. Reported level of training was found to be dependent on provider's age and the differences in responses were important and consistent ($\chi^2 = 12.40$; p= .015; frequency >15%). Results showed: 18% of providers aged 34 or under, 26% between ages 35-44, 17% between ages 45-54, and none between ages 55-64 or 65 years or over had training of complementary medicine therapies in medical school.

Several specific complementary medicine therapies were reported to have been included in responding provider's educations. Healthcare provider respondents (n=152) reported on their level of training for each CM therapy in the study (see Table 14).

Table 14. Level of Training in Complementary Medicine Therapies

Complementary Therapies	% High	% Moderate	% Uncertain	% Low	% None
Acupuncture	2	9	1	37	51
Aromatherapy	0	3	5	24	68
Biofeedback	0	19	3	40	38
Chiropractic	5	8	2	34	51
Herbal Medicine	3	24	3	33	37
Homeopathy	1	10	3	24	62
Massage therapy	3	18	4	29	46
Naturopathy	1	9	3	24	63
Nutritional therapy	5	27	3	37	28
Relaxation therapy	3	20	3	35	39

Note: Exposure to these CM therapies may have been through either continuing education units or medical school training.

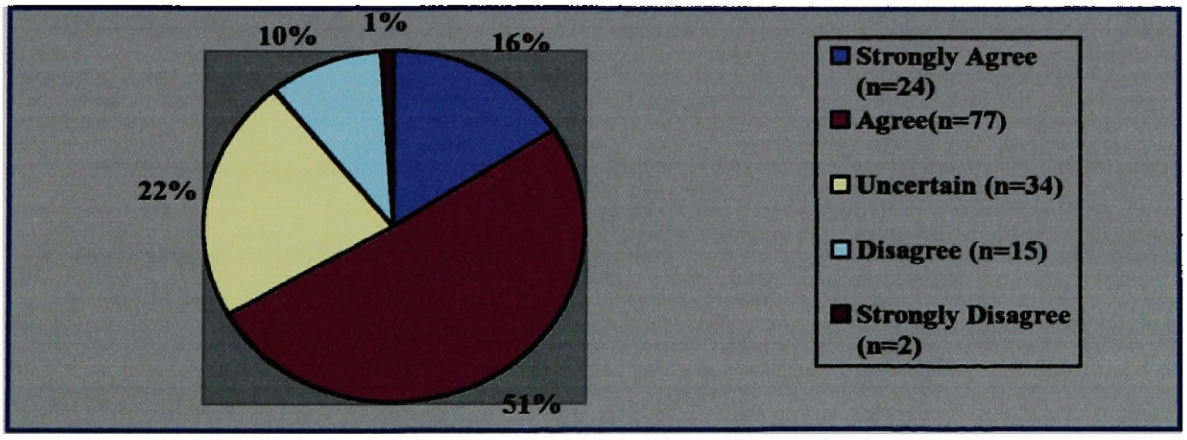
Although level of training was low for healthcare providers of complementary medicine therapies as a whole, respondents did report some training. Highest frequencies of "high" to "moderate" provider training levels were reported for the following CM therapies: nutritional therapies (32%), herbal medicines (27%), relaxation therapy (23%), and massage therapy (21%). Highest frequencies of "low" to "none" reports of provider

training levels in CM therapies were found for: aromatherapy (92%), acupuncture (88%), naturopathy (87%), homeopathy (86%), and chiropractic (85%).

Provider Interest in Future Training in Complementary Medicine

Montana healthcare provider's training in complementary medicine therapies was very low, with only 15% reporting any initial training of CM therapies in medical school. Some training was reported by providers in specific CM therapies, either through medical school or continuing education. In order to investigate provider's level of interest in future training in complementary medicine therapies, the sample population was asked if " complementary medicine therapies should be offered to healthcare providers as continuing education units (CEUs)" and of their perceived "value of including CM therapy in initial medical training". The majority (67%) of respondents "strongly agreed" or "agreed" that complementary medicine therapies should be offered to healthcare providers as continuing education units, or CEUs (see Chart 3).

Chart 3. Provider's Interest in Future Training in Complementary Medicine



Healthcare provider's interest in future training of complementary medicine therapies was dependent on reported degree and gender. Differences in reported levels of interest in future CM therapy training were found to be important and consistent for

degree classification ($\chi^2 = 23.36$; p= .003, frequency >15%) and gender ($\chi^2 = 21.06$; p< .0001; frequency >15%) (see Table 15).

Table 15. Cross-tabulation: Provider's Degree & Gender with Interest in Continuing Education Units in Complementary Medicine Therapies

		Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
Gender	**Male**	7	51	27	13	2
	Female	33	50	13	4	0
Degree	**Physicians**	9	51	27	12	1
	Nurse Practitioners	35	53	12	0	0
	Physicians Assistants	33	40	7	13	7

The majority of respondents agreed that additional training in complementary medicine should be offered to healthcare providers. Sixty percent of physicians, 88% of nurse practitioners, and 73% of physicians assistants "strongly agree" or "agree" that complementary medicine should be offered to healthcare providers as continuing education units (CEUs). While 58% of male and 83% of female healthcare providers "strongly agree" or "agree" in CEUs for providers in complementary medicine.

Montana healthcare providers responded to the question "What do you believe the value would be of including the following therapies in initial medical school training?". Responding provider's perceived values of including specific complementary medicine therapies in healthcare provider's initial medical school training varied by therapy (see Table 16, p.55).

Table 16. Value of Including CM Therapies in Initial Medical Training

Complementary Therapies	% High	% Moderate	% Uncertain	% Low	% None
Acupuncture	18	26	16	29	11
Aromatherapy	7	6	18	28	41
Biofeedback	16	34	17	22	11
Chiropractic	15	21	15	27	22
Herbal Medicine	17	28	20	20	15
Homeopathy	9	9	21	23	38
Massage therapy	18	25	16	23	18
Naturopathy	10	11	23	23	33
Nutritional therapy	24	34	15	17	10
Relaxation therapy	24	29	16	18	13

The highest frequencies of provider's responses of "high" to "moderate" perceived values for inclusion of complementary medicine therapies in initial medical training were found for the following: nutritional therapy (58%), relaxation therapy (53%), biofeedback (50%), and herbal medicines (45%). The most frequent responses of "low" or "none" for perceived values of CM therapy inclusion in provider's medical training were reported for: aromatherapy (69%), homeopathy (61%), naturopathy (56%), and chiropractic (49%).

Referral to Complementary Medicine

In relation to healthcare provider's referral habits to complementary medicine practitioners, respondents were asked: "if they refer patients to complementary medicine practitioners", "their estimated frequency of referrals per month", and which, if any, "specific health conditions were considered for referral to a complementary medicine practitioner". The majority (59%) of respondents (n=152) reported to refer to CM practitioners (see Table 17, p. 56).

Table 17. Healthcare Provider Referral to CM Practitioners

Reported Referral:	Frequency	Percent
Yes	90	59%
No	60	40%
No answer	2	1%

Healthcare providers were asked to estimate their frequency of referral to complementary medicine practitioners. Estimated referral rates ranged from 1 to 50 percent referrals per month, the majority reporting between 1 - 5 percent referrals per month from healthcare providers to CM practitioners. Cross-tabulations were computed between reported referral and provider's gender, degree, age, and practice location. Results showed that referral is dependent on such demographic factors as provider's gender and age with differences found to be important and consistent for these factors. Results for cross-tabulations between demographic factors and reported referral follow:

1) The difference between healthcare provider's gender and reported referral to CM practitioners was found to be important and consistent ($\chi^2 = 6.98$; p= .03; frequency >15%) with fifty-two percent of responding males (n=100) and 73% of responding females (n=52) reporting to refer to CM practitioners.
2) Fifty- four percent of physicians (n=111), 77% of nurse practitioners (n=26), and 67% of physician's assistants (n=15) reported referral to CM practitioners.
3) The difference between reported referrals to CM practitioners and provider's age was important and consistent ($\chi^2 = 19.09$; p= .014; frequency >15%). Referrals to CM practitioners were reportedly made by 55% of respondents aged 34 or under (n=11), 68% of those between ages 35-44 years (n=38), 69% of those between

ages 45-54 years (n=58), 52% of those between ages 55-64 years (n=31), and 14% of those 65 years or older.

4) Referrals were reportedly made to CM practitioners by 54% of providers in private practice (n=63), 62% in hospital-based practice (n=34), 100% in academic practice (n=1), 66% in clinics (n=32), 71% in public health clinics (n=7), and 53% in other practice locations (n=15).

Additional results indicate specific factors that may have influenced differing reports of referral to complementary medicine practitioners by healthcare providers. Contributing factors to referral include provider's reported "belief that more rigorous research is needed before used or referred", "belief that efficacy and safety have been demonstrated well enough for use and referral", and "belief that CM therapies have seen an increase in referral requests from their patients". Healthcare provider's responses follow:

1) The majority (67%) of responding providers "strongly agree" or "agree" that more rigorous research is needed before complementary medicine can be used or referred, while 13% were "uncertain", and 20% "disagreed" or "strongly disagreed" with this statement.
2) The majority (51%) of providers "disagreed" or "strongly disagreed" that efficacy and safety of complementary medicine therapies has been demonstrated well enough for use and/or referral, with 34% "uncertain", and 15% "strongly agreeing" or "agreeing" with this statement.
3) In response to whether providers had seen a recent increases in referral requests to complementary medicine therapies from their patients, the majority (49%)of

providers "disagreed" or "strongly disagreed" while 28% "strongly agreed" or "agreed" and 23% were "uncertain".

The above healthcare providers reported responses to these three statements relating to referral to CM practitioners varied by degree, gender, and practice location. Important and consistent differences were found between provider's degree and responses to "efficacy and safety demonstrated well enough for use", gender and "CMT has recently seen an increase in referral requests from patients", and practice location with all three statements relating to referral. Results for cross-tabulations between demographic factors and responses to statements relating to provider's referral to CM practitioners that were found to have important and consistent differences follow:

1) The majority of physicians (51%) "disagreed" or "strongly disagreed" that "CM therapies have demonstrated enough efficacy and safety for use and/or referral", with 15% "agreeing" and 33% "uncertain". Forty- six percent of NPs "disagreed" or "strongly disagreed" with this statement, 38% were "uncertain" and 15% "strongly agreed" or "agreed". Finally, the majority of PAs (60%) "disagreed" or "strongly disagreed" with this statement, 33% were "uncertain", and 6% "agreed". Response to the statement on CM therapy's demonstrated efficacy and safety was found to be dependent on provider's reported degree at important and consistent levels ($\chi^2 = 16.800$; p= .032; frequency >15%).
2) The majority of males (56%) "disagreed" or "strongly disagreed" that they have seen an increase in patients requests for referral to CM therapies, with 24% "uncertain", and 20% "agreeing". Whereas forty-two of females "strongly agreed" or "agreed" that they had seen increases in patient referral requests of CM

therapies, with 37% "disagreeing" or "strongly disagreeing" and 21% "uncertain". Responses to this statement on increases in referral requests were dependent on gender, with differences at important and consistent levels (χ^2 =15.044; p= .005, frequency >15%).

3) Responses of providers in private practice (59%), hospitals (32%), none in academics, clinics (50%), public health clinics (37%), and other practice settings (47%) "disagreed" or "strongly disagreed" that "CM therapies have seen an increase in referral requests from patients". Differences were found to be at important and consistent levels (χ^2 = 44.224; p = .001; frequency >15%).
4) The majority of respondents in private practice (60%), hospitals (41%), clinics (50%), public health clinics (57%), and other practice settings (40%) "disagree" or "strongly disagree" with the statement "CM therapies efficacy and safety have been demonstrated well enough for use/ referral". Differences in reported belief were important and consistent (χ^2 =95.29; p< .0001; frequency>15%).
5) The majority of providers in private practice (76%), hospitals (62%), clinics (63%), public health clinics (57%), and other practice settings (53%) "strongly agree" or "agree" that "complementary medicine therapies require more rigorous research before used and/or referred". Differences in reported belief were important and consistent (χ^2 =54.01; p< .0001; frequency >15%).

Differences in reported provider responses to the statements on belief that more rigorous research is needed before used or referred, efficacy and safety have been demonstrated well enough for use and referral, and CM therapies have seen an

increase in referral requests from patients were most dependent on provider's reported practice location, with degree and gender influencing some statements.

Referral for Specific Health Complaints

The majority (59%) of Montana healthcare providers reported to refer patients to complementary medicine practitioners. Providers were asked which specific health problems they referred to CM practitioners. Responding healthcare providers reported to have considered and/or conducted referral to complementary medicine practitioners for a number of common health complaints. The survey instructed responding providers to check all of the listed health complaints that applied to their incidence of referral to complementary medicine practitioners within the past year (see Table 18).

Table 18. Health Complaints Referred to CM Practitioners

Health Complaints:	Frequency	Percent Referred
Addictions	54	36%
Allergies	41	27%
Arthritis	55	36%
Asthma	23	15%
Back problems	108	71%
Chronic Pain	112	74%
Fatigue	82	54%
HIV/ AIDS	16	11%
Irritable Bowel Syndrome	60	40%
Menstrual problems	39	26%
Migraines/ Headaches	82	54%
Musculoskeletal problems	93	61%
Psychological disorders	61	40%
Stress/ Anxiety	107	70%
Weight problems	64	42%
Other ***	7	5%

***** "Other" =** ***smoking cessation, alcohol addictions, pre-diabetes, and motor vehicle accident***

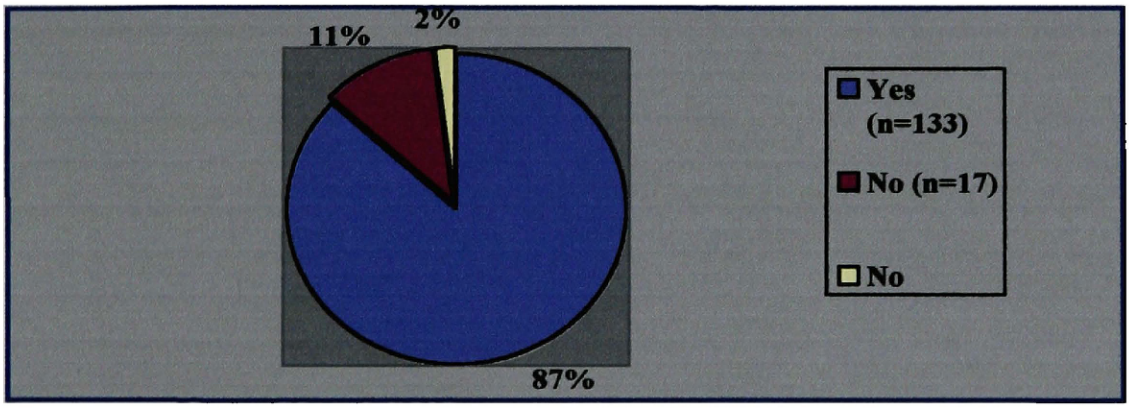
Healthcare providers reported the highest referral rates to CM practitioners for the following health conditions: chronic pain (74%), stress/ anxiety (71%), back problems

(70%), and musculoskeletal problems (61%). Health conditions least referred to CM practitioners by healthcare providers were: HIV/ AIDS (11%), asthma (15%), menstrual problems (26%), and allergies (27%).

Licensing/Regulation

The licensing of complementary medicine practitioners depends on the specific CM therapy practiced. Many CM practitioners are not regulated or licensed in Montana. Healthcare providers were asked about their beliefs of the licensing and regulation of complementary medicine practitioners. Providers (n=152) responded either "yes" or "no" to the question "Do you believe that complementary medicine practitioners should be licensed and/ or regulated?". Results for provider responses follow (see Chart 4).

Chart 4. Belief in the Licensing/ Regulation of CM Practitioners



The majority (87%) of responding providers reportedly believed in the licensing and regulation of CM practitioners. This issue was investigated further with providers asked whether or not they agreed with the statement "Complementary medicine should be regulated and/or licensed to ensure consumer safety" or " How does the licensing status of a complementary medicine practitioner influence your referral to them?". Results for the latter question are in the form of qualitative data (see page 68 for results). The majority (80%) of providers (n=152) "strongly agreed" or "agreed" that complementary

medicine practitioners should be regulated for the expressed purpose of ensuring the safety of patients (see Table 19).

Table 19. Provider's Belief in Licensing CM to Ensure Patient Safety

Responses:	**Strongly Agree**	**Agree**	**Uncertain**	**Disagree**	**Strongly Disagree**
Frequency	38	83	21	6	4
Percent	25%	55%	14%	4%	2%

In addition, comparisons were made between reported beliefs of licensing for complementary medicine practitioners and provider's reported gender, degree, referral frequency, and perceived patient use. Although none of the differences between reported belief in licensing and/or regulation for CM therapies and demographic factors were found to be important or consistent based on our apriori levels, the results were recorded. Cross-tabulations showed the following results:

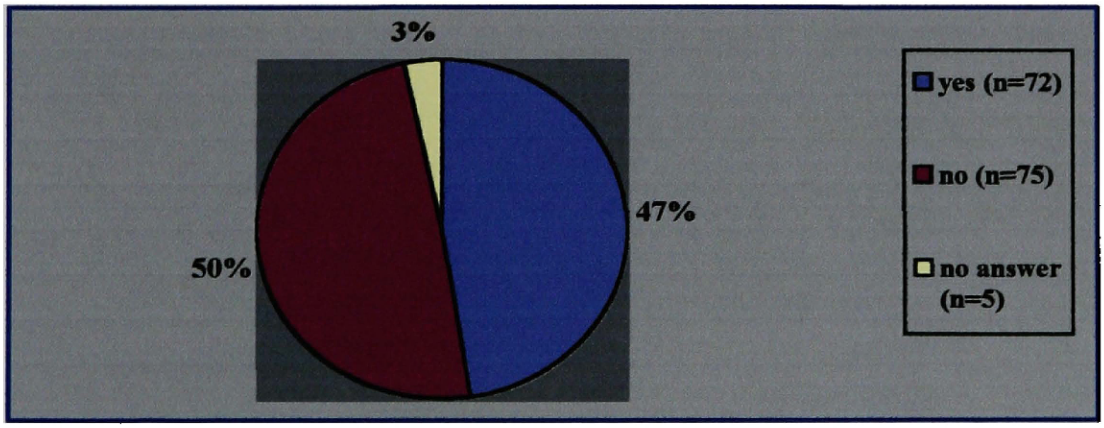
1) The majority of both genders of respondents reportedly believed in licensing and regulation for CM practitioners, with 84% of male respondents and 94% of female respondents holding this belief.
2) Eight-five percent of responding physicians, 96% of nurse practitioners, and 93% of physician's assistants reportedly believed in the licensing and regulation of complementary medicine practitioners.
3) Of respondents who reported not to believe in licensing (n=17), 29% refer to CM practitioners compared to a 63% referral rate from providers who reported to believe in licensing (n=133).

4) Sixty- five percent of respondents who reported to believe in licensing agreed that complementary medicine has been used by more of their patients in the past year.

Health Insurance Coverage

Health insurance companies in the United States do not typically cover complementary medicine therapies. Healthcare providers responded to several survey questions dealing with the issue of health insurance coverage for complementary medicines. Results included "yes" or "no" responses to "Do you believe that complementary medicine therapies should be covered by health insurance plans?". Further inquiries were made in the form of the qualitative question: "How do you think that health insurance coverage, or lack of, for CM therapies influences its use, acceptance, and inclusion into the healthcare system?" (see page 73 for results). Half (50%) of responding providers reported to be against health insurance coverage for complementary medicine therapies (see Chart 5).

Chart 5. Provider's Beliefs on Health Insurance Coverage for CMTs



Reported beliefs on health insurance coverage for complementary medicine therapies were compared to several factors to explore importance and consistency of variance in responses. Factors included provider's degree, gender, age, practice location,

perceived patient use, referral, and level of training. Several of the findings for comparisons between belief in health insurance coverage for CM therapies and other factors were found to be important and consistent. Results follow:

1) Thirty-nine percent of physicians (n=111), 77% of nurse practitioners (n=26), and 60% of physician's assistant's (n=15) believed in health insurance coverage for CM therapies. Provider's reported belief in health insurance coverage was dependent on provider's degree with differences at important and consistent levels ($\chi^2 = 14.423$; p= .006; frequency >15%).
2) Of the males (n=100) in the sample population, 35% reported that they believed in health insurance coverage for CM therapies compared to 71% of the female (n=52) respondents. Provider's reported belief of health insurance coverage was dependent on gender and differences were found to be important and consistent ($\chi^2 = 19.006$; p< .001, frequency >15%).
3) A belief in health insurance coverage for CM therapies was reported by 64% of provider's aged 34 and under, 61% between the ages of 35-44, 52% between the ages of 45-54; 29% between the ages of 55-64, and 21% by those 65 years and older. Providers reported belief in health insurance coverage was dependent on age and differences were important and consistent ($\chi^2 = 15.594$; p= .049; frequency >15%).
4) Practice locations for providers who reported a belief in health insurance coverage were: 35% in private practice (n= 63), 56% in hospital based practice (n=34), 100% in academic (n=1), 56% in clinic (n=32), 57% in public health (n=7), and

53% in other settings (n=15). No importance or consistency was found between different responses for practice location and belief in health insurance coverage.

5) The majority (78%)of providers who believed in health insurance coverage also agreed that their patients have increased their use of complementary medicine over the past year. Provider's belief of health insurance coverage was dependent on belief that patient's use of CM therapies had increased and differences in responses were important and consistent ($\chi^2 = 16.707$; p= .033).

6) Sixty-one percent of responding providers that reported referral to complementary medicine practitioners also reported a belief in health insurance coverage for CM therapies, compared to 34% of those who reportedly do not refer. Provider's belief in health insurance coverage was dependent on reported referral to CM practitioners and differences in responses were important and consistent ($\chi^2 = 20.040$; p< .001, frequency >15%).

7) Of responding providers who reported to have had no initial training of complementary medicine in medical school (n=130), 55% do not and 42% do believe in health insurance coverage for CM therapies. Provider's belief in health insurance coverage was dependent on reported training of complementary medicine in medical school with differences at important and consistent levels ($\chi^2 = 10.041$; p= .007).

Provider's belief in health insurance coverage seems to be dependent on degree classification, gender, age, training levels in CM therapies, referral of CM therapies, and belief in the increase use of CM therapies by patients. While belief in health insurance coverage for complementary medicine was not dependent on provider's practice setting.

Factors Contributing to Provider Beliefs on Complementary Medicine

Respondents (n=152) reported a variety of factors that contributed, either positively or negatively, to their reported beliefs about complementary medicine. Providers were asked "Which of the following factors contributed to your above reported beliefs of complementary medicine therapies". Instructions were to "check all that apply" from a list of factors that may have influenced their reported beliefs, perceptions, and practices in complementary medicine (see Table 20).

Table 20. Factors Contributing to Beliefs on Complementary Medicine

Contributing Factors:	Frequency	Percent
A. Personal experience	115	76%
B. Family related experience	56	37%
C. Clinical observation	129	85%
D. Scientific trials/ Research	89	59%
E. Patient endorsement	71	47%
F. Endorsement from other providers	35	23%
G. Professional training	64	42%
H. Media attention to therapies	30	20%
I. Exposure from lectures/ CEUs	78	51%
J. Other * **	3	2%
K. Not Applicable	2	1%

***- *"Other" included: Internet and Dr. Andrew Weil lectures*

A percentage of responding healthcare providers reported each of these factors as having influenced their beliefs and practices in complementary medicine. The highest frequency of healthcare providers reported the following factors to have influenced their beliefs on complementary medicines: clinical observation (85%), personal experience (76%), scientific trials or research (59%), and exposure from lectures or CEUs (51%). The lowest frequency of providers reported the following factors as having contributing to their beliefs of complementary medicines: media attention to therapies (20%), endorsement from other providers (23%), and family related experience (37%).

Overview of Responses on Training, Referral, and Belief in Licensing & Insurance

Finally, in order to better understand Montana healthcare provider's perceptions and practices of complementary medicine, an overview of responses has been included. Demographic factors of degree classification, gender, practice setting, and age have been compared to reported training level, referral, and belief in licensing/ regulation and health insurance coverage of complementary medicine therapies (see Table 21).

Table 21. Summary: Provider's Degree, Gender, Practice Setting, & Age with Reported Levels of Training, Referral, and Belief in Licensing & Health Insurance Coverage for Complementary Medicine

Provider's Percentage of "Yes" Responses for:		Training Level in CM	Referral to CM	Belief in Licensing for CM	Belief in Health Insurance Coverage for CM
Gender	Male (n=100)	12%	52%	84%	35%
	Female (n=52)	19%	73%	94%	71%
Degree	Physician (n=111)	12%	54%	85%	39%
	Nurse Practitioner (n=26)	23%	77%	96%	77%
	Physicians Assistant (n=15)	20%	67%	93%	60%
Practice Setting	Private (n=63)	13%	54%	89%	35%
	Hospital (n=34)	15%	62%	85%	56%
	Academic (n=1)	100%	100%	100%	100%
	Clinic (n=32)	16%	66%	94%	56%
	Public Health Clinic (n=7)	29%	71%	71%	57%
	Other (n=15)	7%	53%	87%	53%
Age	< 35 years (n=11)	18%	55%	100%	64%
	35-44 years (n=38)	26%	68%	84%	61%
	45-54 years (n=58)	17%	69%	91%	52%
	55-64 years (n=31)	0	52%	81%	29%
	> 65 years (n=14)	0	14%	86%	21%

Qualitative Survey Results

Qualitative data was gathered on a variety of topics concerning complementary medicine. Topics included: beliefs on licensing/regulation, health insurance coverage, CM therapies included in initial medical school training, as well as reports on 'other' health complaints considered for referral to CM practitioners. A majority of responding healthcare providers made comments to the open–ended survey questions. Researchers categorized these comments into related themes under each main topic. The following qualitative survey questions were included:

1) "How does the licensing status of a complementary medicine practitioner influence your referral to them?"
2) "How do you think that health insurance coverage, or lack of, for complementary medicine therapies influences its use, acceptance, and inclusion into the healthcare system?"
3) "If yes (to having CM therapies in initial medical schooling), in what specific complementary therapies?"
4) "Which other health complaints would you consider referring patients to for treatment by a complementary medicine practitioner?"

Several themes were found for each of these qualitative questions. Additional comments are also reported below that were also volunteered by responding healthcare providers.

Licensing & Regulation for CM practitioners

Theme 1: Licensing and Referral

Many in the sample population of healthcare providers stressed that they would be more likely to refer to licensed or regulated practitioners. Some of the comments made

were: "Best probably to license and thus control- I will not refer to unlicensed individuals"; "Would not refer without some sort of quality regulation"; "My referral to them is affected favorably if licensed"; "If I know their training and if they have passed an exam- I might feel more comfortable to refer to CM practitioners"; "I would only refer to licensed practitioners- Basically No license, No referral"; "When complementary medicine practitioners are licensed I am more comfortable of the idea of referring patients and less likely to refer if not licensed"; "I refer only if patient requests but would be more likely to refer to licensed practitioners"; "I rarely refer to any CM practitioner regardless of licensing status but I believe it should be regulated nonetheless"; "The only referral I will do is to licensed massage therapists, chiropractors, or psychologists for health problems"; "I will only refer to someone trained and credentialed- rarely refer anyone to lay persons"; "I refer patients to practitioners based on other well- respected practitioners advice & won't refer without a proper license"; and finally, "I'm more inclined to refer a patient to a licensed & accredited practitioner".

Theme 2: Standards of Training/Control

Another theme that arose often in the qualitative data on licensing was the potential power of regulation to provide needed standards and control over practice. Comments included: "Allows for minimal training standards"; "Could be certain of minimal level of competence-It offers a safety net that they (CM practitioners) are practicing within a defined parameter and are subject to disciplinary action if they do not maintain quality"; "Should be a governing body to police and establish recommended general guidelines"; "Makes me more comfortable that some degree of training was obtained"; "Indicates an achievement of a level of competence as advocated by their peer

group"; "They would have to meet certain professional, ethical, and safety standards"; "Yes- But the regulation should come from within each field- I tend to refer to people whom I know to be well-trained, smart, responsible, and caring. If they meet this criteria then licensing is not important"; "They need certification, studies, and papers, etc. to be better accepted"; "There should be a standard. Also if third party payers are going to be involved there has to be a level of accountability"; "A standard and recognizable certification- such as ANCC- would increase the possibility of referral. Massage therapy training for example ranges from 2 weeks to 2 years"; "To be a part of the team or colleagueship and to be protect my license, I expect a complementary medicine practitioner to be licensed and meet their CEU credits to maintain their licensure- just like I do"; and lastly, "Licensing seems more important in the dispensing of substances like herbs but in general a standardization procedure like licensing would hopefully ensure a higher standard of care".

Theme 3: Increasing the Competence of CM Practitioners

The regulation of complementary medicine therapies was reported by responding healthcare providers as having the potential to increase the competence and training of CM practitioners. Several of the statements alluding to increasing the competence of CM practitioners were: "Would ensure ability to recognize organic problems and recognize medical emergencies & guarantees a level of expertise"; "If licensed then I would feel that they would have a certain level of certified competence"; "There would be a proper assessment of background training and a statement of proven professional competency"; "It shows willingness of accountability and indicates their ability to prove proficiency"; "The only way to maintain any quality is to have licensing - It would help distinguish

trained persons from charlatans"; "Ensures a basic level of training in this field- I would feel that the person to whom I am referring patients was more reliable and better trained"; "Licensing assures Quality control"; "Licensing indicates the practitioner has safety guidelines to follow and basic competency must be established before formal referral- licensure would help to establish this baseline"; "Complementary practitioners must be held responsible for the care they provide"; "I feel more reassured that they know what they are doing and I think it is an important objective measure of their education and competence"; and also that, it "gives a standard of practice and a level of care you can expect".

Theme 4: Safety of Patients

Along these same lines of the need for quality control and competence through licensure, provider's also reported the concern for patient safety. Several of the statements made in the context of patient safety were: "Hopefully licensing assures a measure of patient safety"; "Licensing conforms professional respectability and helps ensure that patients receive appropriate care from properly trained practitioners"; "Ensures the safety of patients to ensure quality of providers"; "I want to know that the patient will be safe- I had a patient on thyroid therapy by a naturopath- the patient was euthyroid and had reflux with dysphasia- I wasn't impressed"; "Could be assured of the level of training, proficiency, and uniformity of training and thereby be assured the efficacy and safety for patients I would refer"; "Not until I know that therapies are safe for patients"; and finally a call for equal treatment for providers and CM practitioners, "If I need to be licensed, other persons that are entrusted with the health needs of any individual also need to be skilled and preferably licensed".

Theme 5: Needs Scientific Proof

Scientific proof through randomized controlled trials was demanded before licensing and inclusion in the wider healthcare communities. Providers voiced: "I would utilize any modality licensed, regulated, and proven by scientific method"; "Only after their discipline has been proven to be effective"; "I need to see some scientific research that these therapies work. Does licensing legitimize a therapy?"; "Only if proven to be effective by scientific controlled research trials"; and simply, "Licensing only if there is sufficient research to support the therapy".

Theme 6: Trust of CM Practitioners

Potential for increased trust of CM therapies and practitioners came up frequently in comments regarding licensing. Several of the comments were: "If not regulated I don't have much trust in them"; "Licensing removes liability for patients outcome or injury & increases my level of trust"; "I would feel more safe and better knowing that there is a process for the practitioners to be licensed and it might increase utilization if I were better able to tell who's knowledgeable and who's not"; "I'd be more likely to refer if I knew they adhered to some standards of excellence and ethics"; "It does not- trust and personal experience more relevant; I look for people who have taken the time to get professional training in their field- especially nutrition, chiropractic, counseling, acupuncture- some physicians in our area do acupuncture- I use them first"; and a final piece of advice for complementary medicine, "Since this is an emerging field of specialized treatment I want to refer patients to a highly educated and recognized profession. Not because of skepticism on my part but on the part of the general public. Alternative medicine needs to

make a breakthrough into the conservative pharmacology based medical field with a powerful educated punch. Only then will the traditional providers recognize them".

Theme 7: Major Concerns in Licensing CM practitioners

There were numerous concerns brought up about licensing and regulation for CM practitioners. The following comments demonstrated some negative perceptions towards complementary medicine: "You may as well license witch doctors!!!"; "Either answer (licensing or not) legitimizes the bogus complementary procedures"; "It opens the door for bogus procedures"; "Should only be used if ordered by a doctor"; "[Complementary medicine] should be Outlawed!!"; and finally a concern was voiced over regulation by outside authorities, "I think it would be a disaster to allow western Medical practitioners any regulating control over these practices. Too much intellect is not what these practitioners need".

Health Insurance Coverage

Theme 8: Needs more Research & Scientific Proof

Healthcare providers were very adamant about the need for more scientific research before insurance should cover complementary medicine. Statements included: "Not unless there is proven efficiency in scientific trials that are double blind; "Not until scientific study can prove their efficacy"; "As long as 'demonstrated impact rated' then modalities should be included"; "Complementary medicine and traditional medicine are artificial distinctions. Really we should separate therapies into: what works- as documented by observational studies, i.e. science- and what is proven not to work, -i.e. disproved therapies such as vitamin C to prevent prostate cancer"; "Health insurance should only cover the basic and necessary care that is outcome proven, data based

evidence, not testimonials"; "Until these therapies can be absolutely, scientifically proven to have a positive, actual effect on disease entities they should not be covered by any insurance "Yes- when scientifically proven to help"; "People use it regardless of the fact there is no scientific data supporting it. I doubt whether it should be covered by any insurance plan until tested as rigorously as conventional therapies "It is not patient driven. Only those (therapies) proven to be effective in standard trials should be covered"; "Only if performed by a licensed practitioner after scientific knowledge base demonstrated"; and clearly expressed, "Health plans should reimburse only these therapies shown to be effective by randomized clinical trials".

Several of the healthcare providers reported a belief that by providing health insurance coverage for CM therapies, it may actually manifest some of the needed research data. Comments were: "Inclusion of some therapies in insurance coverage could provide much needed data on their efficacy", "Proven therapeutic measures should be covered and would increase client willingness to try them, thus producing more data"; and, "This [insurance coverage] would provide at least better anecdotal information on the efficacy of various CM therapies".

Theme 9: Health Insurance Coverage Needs Limits

Concerns about limits on health insurance coverage for complementary medicine therapies were voiced. Several concerns were: "Possibly set amount allowed per calendar year- insurance companies do not dictate which care patients may receive or participate in only which care they will pay for, after that like many other things in life, it is a consumer decision"; "To some extent but it should be very specific and controlled"; "Yes- health insurance coverage varies by therapy- only some of them should be

covered"; "Insurance can't pay for everything!!"; "Yes- but only for cases with proven record of helping (i.e. chiropractic for back pain)"; "I think coverage for a service gives patients implied evidence of benefits from a therapy. It should therefore be limited to the few complementary therapies that have some scientific evidence for their use"; "Some areas should like chiropractic, massage therapy, and nutritional therapy"; "Only if referred by MD, PA, or NP; Has to be addressed on level of evidence of individual discipline- some only for specific indications"; "Possibly certain therapies for certain diagnosis i.e. chronic headaches- relaxation, raynauds or incontinence- biofeedback, osteoarthritis- glucosomene/ chondroter"; and finally a call for licensing before coverage, "Only if properly regulated and credentialed" and "Not until these professionals are licensed and regulated".

Theme 10: Concerns for Patient Utilization & Costs

Responding healthcare providers showed concern for their patient's limited access to complementary medicines. Several of the statements made were: "Fewer patients of mine take advantage of biofeedback, acupuncture, etc. because they can't afford these out of pocket services"; "Yes- especially for chronic pain- this would save money and possibly avoid addictions to narcotics"; "Use of any therapy medical, complementary or other that could be helpful will be used less if not covered by insurance"; "If covered it would greatly enhance use- use is definitely limited now by lack of coverage"; "Non inclusion in health insurance plans make many complementary therapies less accessible to many than they should be- many people cannot afford complementary medicine if not covered by insurance"; ". "Yes, more individuals would utilize complementary therapies if they were covered"; "Patients I feel would be more likely to pay a co-pay if insurance

would help"; "Patients would be more willing to try an unknown service if it was covered verses having to pay for something they're not sure about"; "Frequently I would refer patients to alternative therapy but they can't afford it"; "It keeps some patients from getting care. But I notice a lot of patients seek complementary medicine before coming to MDs"; and further showing of concern for patients, "Lack of coverage decreases referrals and patient utilization even if desired by practitioner and/ or patient".

Other providers felt confident that patients will use CM therapies regardless of insurance coverage, stating that: "In some cases- People will pay out of pocket for there therapies and may be more sophisticated consumers if they pay themselves. I do acupuncture and patients who benefit seem happy to pay" and "Depends on patients philosophy- some patients will only use if covered by insurance while others will use regardless of coverage if they already have a more naturalist belief in medicine (usually younger women who watch their diets closely, exercise regularly, and are in tune with their bodies)".

An additional concern shown for patient's well being was that they may not recognize the many benefits of complementary medicine without insurance coverage increasing accessibility. For instance, providers stated: "Yes- I think it (lack of insurance coverage) perpetuates the idea that alternative medicine is not necessary for health. Some insurance companies in California are recognizing and covering alternative medicine, realizing the value for preventive health and helping to "cure" problems drugs could not"; "Without insurance coverage, many patients who might benefit from alternative therapies will go untreated and 2"; "Most people with insurance will go only to a Medical person that utilizes their insurance"; " I think that it influences clients choices when their

insurance company does not cover complementary therapies"; "It (lack of health insurance) denies access to those types of therapies if someone doesn't have the financial means to explore them as an alternative or additional means of treatment"; and, "Many people would use and probably even prefer access to the other disciplines for multiple health concerns and for health maintenance, if only they could afford to access these modalities".

Theme 11: May Increase the Burden on the Health Insurance Industry

Provider's fears emerged of the possible effects health insurance coverage for complementary medicine could have over the whole industry. Several of the concerns given were: "Would likely increase load on the insurance industry"; "If they are included in health insurance plans without adequate licensing and demonstrated utility, there will be a flood of utilization and a great waste of money"; "We should not be wasting healthcare dollars on useless therapy"; "We have trouble with coverage of conventional proven therapies so it is not a good idea to spread it (insurance coverage) even thinner to cover therapies that are unproven"; "The healthcare insurance system is already overburdened with costs- add alternative therapies and premiums will skyrocket"; "No- it's a waste of money"; "In the ideal world, yes, but in this age of limited resources it seems unlikely"; "It would be an unproven drain on already limited healthcare dollars by minimally trained people with unknown results"; "Therapy will still be patient choice but complementary medicine should not take advantage of hopeless situations"; "More money is spent on alternative medicine than on conventional medical care. It's a national tragedy! How much do naturopaths pay for malpractice insurance?"; "Guarded use- in general seems like it would be beneficial- however can see where use would be abused

by patients and practitioners to further escalate the cost of healthcare"; and in a final display of concern for overall effects, "Not yet. I would need to know what effect it would have on premiums overall".

Theme12: Concerns of Health Insurance Coverage

Other reasons given by healthcare providers for not wanting health insurance coverage for complementary medicine ranged from keeping the charlatans out of healthcare and raises in premiums to the potential harm of substituting CM therapies for conventional healthcare. Comments included: "Evidence is that coverage does not influence use and perception, thou, it would be high if CM were covered- payment factor"; "Complementary medicine is that and should not be considered the only therapeutic option- full coverage might lead to substitution of traditional medicine, which for many cases would be potentially harmful"; "Absolutely no!! People go to these practitioners regardless of insurance coverage- more willing often to pay for this than be compliant to MD recommendations"; "I think patients are more likely to use complementary therapies if not covered by insurance. I don't want my premiums to be increased in order to pay for some bogus therapy"; "No payment by insurance, no use. If people do not pay for their health care but the insurance company pays, they are not vested in their care- Ex. Workers comp"; "Healthcare coverage could legitimize some questionable practices or increase risk of abuse"; "Lack of (health insurance) helps keep the real charlatans out of it!"; "Lack of coverage seems not to matter to patients who believe in these therapies. Do not believe many alternative therapies should be covered by insurance"; and finally, "No- People are always looking for a 'better' answer whether its covered or not".

CM Therapies Included in Provider's Medical Training

Complementary medicine therapies reported by providers to have been included in their initial medical education were: biofeedback, chiropractic, acupuncture, relaxation therapy, homeopathy, nutrition, osteopathy, manipulation, massage, myofascial techniques, and herbal medicines.

Health Complaints Referred to CM Practitioners

Several comments were made in relation to health complaints and provider's referral to complementary medicines. Provider's reported referral for the following health problems: "Refer musculoskeletal problems to chiropractors"; "Refer drug, alcohol, and tobacco addictions to hypnosis and acupuncture"; "Refer patients with arthritis, back problems, chronic pain, stress, and weight problems to biofeedback, relaxation, and dietitian consultation...note nutritional therapy considered that given by a dietitian"; "Refer stress/ anxiety patients to relaxation therapy"; and finally one provider reported to "Refer for motor vehicle accidents". Another provider reported the success of certain complementary therapeutic agents, stating that "I refer for certain agents proven for prescription i.e. saw palmetto-BPH, omega 3 fatty acids- coronary, spinach-prevents macular degeneration".

Additional Provider Comments on Complementary Medicine

There were numerous comments, generally unrelated to each other, which respondents volunteered throughout the survey. A sample of these comments follows: "Media exposure has had a negative affect for me concerning CAM-it's all special interest"; "Naturopathy confuses the patient with pseudo- scientific gibberish"; "Once evidence is established some value/ scores might increase (for individual CM therapies)";

"Demonstrated effects may be due to placebo, but placebo is powerful!"; "Chiropractic has uncertain therapeutic value, its fine for low back but absolutely not fine for cervical manipulation due to stroke risk."; "Chiropractic is dangerous!"; (CM therapies are just)..."Snake oil medicine based on no significant peer reviewed studies." ; (There is)"No registry to follow negative or bad results. My major concern is failure of complementary medicine practitioners to recognize significant health problems." and finally a reflection of the extreme differences amongst complementary medicine therapies, "There is a difference, for example, between a chiropractor who legitimately treats musculoskeletal disorders and one who reports to treat allergies by cracking the neck. There tends to be a mixture of therapies with real benefit (diet/ herbs) and those that have no scientific base, like homeopathy or reflexology. The wheat needs to be sorted from the chaff."

CHAPTER V

DISCUSSION

The purpose of this study was to describe Montana healthcare provider's reported perceptions, attitudes, use, referral, training level, and beliefs on licensing and health insurance coverage of complementary medicine. A survey was used to collect both quantitative and qualitative data on providers reported beliefs of complementary medicine. The following chapter is comprised of a summary of findings, a discussion of themes and vital results, study limitations, and recommendations for further research.

Summary of Findings

This descriptive study produced a variety of interesting results. Overall, Montana healthcare providers in the sample population frequently reported favorable perceptions and practices towards complementary medicine. Yet there remained some residual resistance towards these emerging complementary medicine therapies. Reported perceptions, attitudes, use, referrals, and training levels were shown to vary amongst healthcare providers in relation to demographics of degree, age, gender, years in practice, and location of practice. In addition, specific complementary medicine therapies had varied reported provider beliefs, some CM therapies having little acceptance and others with vast support. This summary of findings will explore these valuable study results.

Demographics

There was a 20% response rate for the sample population of healthcare providers. The return rate was 10% lower than the goal of 30%, which is typical as poor physician response rates to surveys has been repeatedly documented (Ernst et al. 1995). Yet several researchers have found that physician/provider response rates for surveys can remain

poor (approximately 16%) because they are a relatively homogeneous group compared to the general public and may not require large samples for generalizability or to ensure external validity of the data (Berman et al., 1998). Our response rate, though low, is ample enough to describe and begin to understand this sample population's beliefs and practices of complementary medicine.

Healthcare providers of Montana reported demographic characteristics of degree, gender, age, years in practice, practice setting location, and county of practice. There was a large variance between the population sample's reported degrees, with 115 physicians, 26 NPs, and 15 PAs responding to the survey. However, this corresponds to the Montana healthcare provider population, with the total of Montana physicians outnumbering NPs by 69% and PAs by 71% out of the 2644 total Montana providers (MBME, 2003). Gender of the sample departed from state averages, with responding female rates in the sample population (34%) being higher than the state's percentage of females reported as 16% (KFF, State Health Facts, 2003). Perhaps this difference is due in part to our inclusion of nurse practitioners (n=26), 92% of who were female, and to the fact that females as a whole responded more positively to survey questions on perception, referral, and integration of complementary medicine. Females may generally have a more accepting attitude towards complementary medicines, potentially influencing their initial tendency to reply.

The majority of providers reported to be in private practice (40%), with a mean of 15-25 years in practice, and between the ages of 45-54 years (38%). Out of the all reported demographics, degree, gender, practice setting, and age were the best predictors of response. Whereas there were no significant differences found in responses based on

provider's county of practice. Perhaps this was due to the fact that Montana location of practice was distributed fairly evenly over the state, with 32% in the western, 38% in central, and 30% in eastern parts of Montana. Healthcare facilities in Montana tend to be located in larger towns, yet exact location of healthcare provider's within reported counties of practice was not collected due to anonymity. Thus specific practice locales of rural and urban could not be truly distinguished. Montana as a whole is considered to be rural with a total state population of approximately 900,0000 (KFF, State Health Facts, 2003). Providers as a group throughout this rural state seem to be fairly homogeneous, though individuals vary in personal perceptions and practices of CM therapies.

Perceptions & Practices of Complementary Medicine

Healthcare provider's attitudes towards complementary medicine therapies greatly affect their overall usage, referral, and interest in inclusion into the mainstream healthcare system (Astin et al., 1998). Thus, studying provider perceptions, attitudes, and practices is an integral part of understanding the future of complementary medicine within the healthcare system. In this study, healthcare provider attitude measurements towards CM therapies were based on reported perceptions, use, and referral. Level of training and factors contributing to reported beliefs and perceptions for complementary medicines were included in order to provide some context for respondent's reported perceptions and practices.

The relationship between level of training, perceptions, use, and referral is complex. Low reports of training in complementary medicine therapies do not necessarily preclude providers from referring, using, or having a positive perception of such CM therapies (Berman et al., 1998). Yet knowledge of complementary medicine therapies

was closely related to perception, use, and referral practices in several studies (Boucher and Lenz 1998, Berman et al., 2002, Easthope et al., 2000). Findings for these study topics and comparisons to related research are discussed below.

Reported healthcare provider perceptions and attitudes in this study were described for complementary medicine as a whole and for specific CM therapies. Respondents reported many favorable perceptions of complementary medicine including: 63% believing they are useful supplements to conventional medicine, 68% believing them to have methods that could benefit conventional medicine, 51% agreeing that they are useful at treating chronic health conditions, 44% reporting their safety to be greater than many pharmaceutical drugs; and the majority of providers disagreeing that CM therapies are a threat to public health (64%) or are of little or no interest to them or patients (67%). This spectrum of favorable perceptions expresses a growing trend of acceptance and interest in complementary medicine by healthcare providers in Montana.

Findings in the study and those of previous research demonstrate changing physician's attitudes towards complementary medicine. Berman et al. (1995) found that between 70-90% (depending on specific therapy) of physicians accepted CM therapies and considered them to be legitimate medical practices. Boucher and Lenz (1998) found the majority of physicians (65.1%) agreed that alternative therapies hold promise for treating patient's symptoms, conditions, and diseases. Finally, Astin et al. (1998) in a comprehensive review of 25 surveys on complementary medicine, found that on average half of physicians studied believed in the efficacy of CM therapies.

In order to describe provider's perceptions of specific complementary medicine therapies, ten separate CM therapies (see Appendix D, p.118) were investigated under

several measures of belief. Healthcare provider's beliefs of therapeutic value, level of safety, integration, and value of medical training for providers of CM therapies, as well as their training level, professional use, and personal use were recorded for each CM therapy. Reported levels of belief varied substantially between different CM therapies. High levels of belief in all categories were found for the complementary medicine therapies of biofeedback, massage therapy, nutrition therapies, and relaxation therapies.

For instance, respondents reported high marks for belief of therapeutic value and level of safety for most CM therapies. Strong provider beliefs in therapeutic value ranged from 9% for aromatherapy and 14% for homeopathy to 76% for massage therapy and 73% for acupuncture, biofeedback, and relaxation therapies. High provider beliefs in levels of safety were found for all CM therapies, with percentages ranging from 34% for herbal medicine and 36% for naturopathy to 93% for massage therapy and 89% for biofeedback. These findings were similar to results from a national survey, which showed massage therapy, relaxation therapies, guided imagery, nutrition therapy, and biofeedback topping the list of CM therapies accepted by and integrated into provider practice and hospitals (Health Forum, 2002). Yet, study results contrasted those found by Astin et al. (1998) that about half of surveyed physicians reported highest beliefs of efficacy and acceptance for chiropractic (53%), acupuncture (51%), massage (48%), homeopathy (26%), and herbal approaches (13%).

In this study, providers reported low levels of belief for homeopathy, aromatherapy, and naturopathy as well as for acupuncture and chiropractic. Homeopathy, naturopathy, and aromatherapy tend to have lower levels of acceptance in the US compared to other countries like Germany, the Netherlands, and England (Berman et al.,

1998; Perkin et al., 1994). In a study of British general practitioners, for example, White et al. (1997) found that chiropractic and acupuncture were rated as the most effective therapies, with homeopathy and acupuncture being the most practiced by respondents. Finally, Ernst et al. (1995) found through a meta-analysis of 12 complementary medicine surveys from various countries, including the UK, New Zeeland, Germany, and the Netherlands, that massage, acupuncture, and homeopathy ranked highest in terms of usefulness and effectiveness. Perhaps obstructions imposed on such CM therapies as chiropractic, acupuncture, and homeopathy by American Medical Association policies and politics (Goldstein, M., 1999); and/or long held misunderstandings of these therapies; has played a role in their low acceptance by healthcare providers here in the US.

The rural state of Montana seems to have a fairly high rate of acceptance of complementary medicine as a whole compared to other states. Yet the specific CM therapies most used and held in highest regard differ from those found in locations outside Montana. Chiropractic and acupuncture, for example, have relatively high rates of integration in the US and are highly regulated and even covered by many health insurance plans, yet in Montana, reported use and perceptions of these therapies is low. This difference between rural Montana and other states is interesting to note although a true explanation of this phenomenon is uncertain due to the lack of baseline data available on these topics. Perhaps being a rural state, views of traditional or folk medicine differ from more urban-based populations of both providers and public.

Montana healthcare provider's reported personal and clinical use of complementary medicine therapies was comparatively lower than their reported acceptance, and other related research, would suggest. Sixty-four percent of responding

healthcare providers agreed that their patient's use of complementary medicines was increasing, yet reported provider's personal and clinical use remained low. The highest rates of personal use of CM therapies by providers were given for massage therapy (36%), nutritional therapy (34%), and relaxation therapies (30%) with lowest rankings found for homeopathy (2%), naturopathy (3%), and aromatherapy (6%). Highest rates of provider's clinical use of CM therapies were also given for nutritional therapy (31%), massage therapy (22%), and relaxation therapy (22%), with lowest rates of clinical use reported for aromatherapy (2%), homeopathy (3%), naturopathy (5%), and acupuncture (6%). Related research found much higher reported rates of overall CM therapy personal use (76%) by healthcare providers (Burg et al., 1998).

Complementary medicine therapies with the highest rates of use by healthcare providers in Montana were similar to those reported in a national study by Berman et al. (1998), which found the majority of physicians had training and reported usage in nutrition, counseling, and biofeedback. Yet another study by Gordon et al. (1998) found that primary care clinicians (n=624) most frequently used counseling, relaxation therapies, acupuncture, massage therapy, and chiropractic care. Personal and clinical use of particular complementary medicine therapies seems to vary for healthcare providers by state or region. Montana healthcare provider use of specific CM therapies corresponded to reported high levels of belief and acceptance of the CM therapies of nutrition, massage, and relaxation therapies; however biofeedback showed high provider acceptance yet low provider personal and clinical use.

A study by Borkan et al. (1994) showed that physicians who used complementary medicine personally and/or clinically were more likely to have higher rates of referral.

Research has demonstrated that referral by healthcare providers to complementary medicine practitioners is growing. A national study by Berman et al. (2001) showed that 50% of responding physicians had referred patients to complementary medicine therapies. In this study, 59% of healthcare providers reported to refer to complementary medicine practitioners. Referral rates in the responding population were highest for healthcare providers with the following characteristics: nurse practitioners (77%), females (73%), those between the ages of 45-54 (69%), and those practicing in medical clinic practice settings (67%).

Healthcare providers reported referral rates to complementary medicine practitioners for specific patient health problems. Patient's chronic pain (74%), back problems (71%), and stress/ anxiety disorders (70%) were the most frequently reported health problems referred by providers to CM practitioners. Health problems that had the least frequency of provider reports for referred to CM practitioners were HIV/AIDS (11%), asthma (15%), and menstrual problems (26%). It is interesting to note that the lowest reports of Montana provider's referral to CM practitioners were for HIV/AIDS, while a recent study of HIV positive people in Montana by Hackenbruch (1999) found that respondents highest reported healthcare need was for alternative medicine therapies. This incongruence between public demand for complementary medicine therapies and provider acceptance and referral is apparent for many CM therapies.

With the public use of complementary medicine skyrocketing over the past decade, referrals may eventually be forced to increase in order to keep up with demand. Both Eisenberg et al. (1993) and Austin (1998) found that US consumers reported the most frequent use of five complementary medicine therapies: acupuncture, chiropractic,

herbal medicine, massage, and homeopathy. Similar findings of public use of CM therapies named the most commonly used unconventional therapies as chiropractic, massage, herbal remedies, nutrition, and acupuncture (Druss & Rosenheck, 1999). In our study each of these CM therapies, with the exception of massage and nutrition, received low marks for provider acceptance, use, and referral.

As there is baseline data on public use of complementary medicine in Montana, it is difficult to determine whether or not public use of specific CM therapies in this state mirrors national reports. Yet, if national averages hold true for Montana, than public use and provider's referrals of specific CM therapies in this state are in opposition. Perhaps if providers received training in these CM therapies, then referral would increase. In Berman et al. (1995) researchers found that physicians referred patients to CM therapies in which they had received the most training, suggesting that experience and training, not necessarily scientific research, are the best predictors of acceptance and referral.

The majority of providers in this study (86%) reported no initial training of complementary medicines in medical school. Healthcare provider's reported level of training through either medical school or continuing education units (CEUs) for specific CM therapies was highest for nutritional therapies (32%), massage therapy (21%), and biofeedback (19%). These CM therapies also had reported favorable perceptions and personal/clinical usage. Chiropractic (13%) and homeopathy (11%) were shown to have fairly high levels of training by providers compared to their substantially lower ranks of therapeutic value, level of safety, and usage. This differed from previous research that found knowledge based on training levels has a strong correlation to use and attitudes towards complementary medicine therapies (Hopper et al., 1998). A study by Berman et

al. (1998) indicated that acceptance and usage of complementary medicines are strongly predicted by a physician's knowledge and attitudes towards a therapy. It should follow that once providers have more knowledge of a therapy they may be more willing to use the therapy themselves and thus more comfortable with referring it to others; yet this has not necessarily been the case for each CM therapy in this study.

Perhaps future training of providers in CM therapies will eventually increase their acceptance, use, and referral. Although providers reported to have low levels of training for complementary medicine, there was vast interest demonstrated for additional training. The majority of responding healthcare providers (67%) agreed that complementary medicine therapies should be offered to them as CEUs, with this breaking down into 88% of NPs, 73% of PAs, and 60% of physicians. A study by Corbin-Winslow and Shapiro (2002) conferred that most responding physicians (60%) wanted to learn more about complementary medicines. Numerous other studies reported the majority of responding healthcare providers to be interested in further education and training in complementary medicines (Sikland and Laken, 1998; Berman et al., 1995; Boucher and Lenz, 1998).

Finally, data on various factors contributing to Montana healthcare provider's beliefs on complementary medicine may shed light on the origins of reported positive or negative beliefs. The top reported factors influencing provider's beliefs were: clinical observation (85%), personal experience (76%), scientific trials research (59%), and exposure from lectures or CEUs (51%). There was also acknowledgment that patient endorsement (47%) and professional training (42%) also contributed to respondent's beliefs on complementary medicine. These results are similar to those found by Easthope et al. (2000) that provider's 'judgments' came from personal experience, clinical

observation, scientific trials, and patient endorsement. Perhaps these contributing factors had more of a negative affect on provider's views of complementary medicine in light of the lack of reported personal use, training, and appropriate scientific trails acknowledged by the sample population.

Discussion of Findings

There were several themes that surfaced during this descriptive study of healthcare providers and complementary medicine. Many of the same themes were reflected in the preceding literature. This section will summarize and discuss the main themes of healthcare provider's beliefs on licensing/regulation and health insurance coverage for complementary medicine, demand for further scientific research in CM therapies, and interest in the integration of complementary medicines into the mainstream healthcare system.

In the 1980's researchers Salmon & Berliner described a number of policy considerations that would be raised by the emerging holistic health movement, or alternative medicines. These issues were: the gaining of health insurance coverage or third party reimbursement, creating licensure and credentialing for practitioners, integrating into mainstream medical settings, and obtaining funding for research into safety and efficacy of CM therapies (Goldstein, M., 1999). Fast-forward to the year 2003 and we see that these issues remain at the forefront of debates over complementary medicine.

These factors are shaped by healthcare providers themselves as well as by organizations that govern them and mandate their practice; namely insurance and pharmaceutical companies, medical management, and the federal government. The public

also has a major role in producing these emerging trends and changes within the medical system, as they vote their needs and desires with the mighty dollar. In fact, the public appears to be the driving force behind physician's interest in and practice of complementary medicine (Boucher & Lenz, 1998). The increase in public use of complementary medicines has been a main catalyst for growth, acceptance, and inclusion of CM therapies thus far. With over 42.1% of the public using complementary medicines and spending $27 billion a year out-of-pocket (Eisenberg et al., 1998) for these unconventional medical services, they will continue to be a driving force behind its licensing, insurance coverage, research, and future integration.

Licensing and Regulation of Complementary Medicine Practitioners

Growing use and acceptance of complementary medicine by public and physicians alike has attracted attention from policy makers seeking to regulate practices. Healthcare providers within the sample population reported a strong belief in the licensing and regulation of complementary medicine practitioners. A total of 88% of providers agreed with licensing/regulation, with 80% reporting a belief in licensing in order to ensure patient safety. Factors that related to a higher reported belief in licensing/regulation were provider's referral rate (59%) and belief in increasing patient use of CM therapies (64%). Qualitative data revealed several themes, such as: increased likelihood of referral if assured of regulation and proper training of CM practitioners, the creation of regulation's standards of practice, and education of CM practitioners to promote competence, accountability, and assured patient safety.

As there has been little data relating to provider's belief in licensing/ regulation of CM practitioners gathered in previous literature, it is difficult to compare these study

results. However, several articles have been written on the topic of licensing/ regulation for CM practitioners. Research has shown that standardized training, competence, and patient safety are important concerns in regards to credentialing of complementary medicines (Eisenberg et al., 2002).

There are social and political barriers that affect the licensing status of CM practitioners. Legal recognition of CM practitioners through licensure is a legal process with debates over scope of practice, prescription authority, and role of physician supervision (Eisenberg et al., 2002). Medicine in the US as a whole is tightly regulated in terms of scope of practice and licensure, thus creating a barrier to entry into the healthcare system. Until the last decade the federal, state, and local healthcare regulatory agencies have responded to complementary medicines by restricting access to and delivery of services to protect the public from unproven and potentially dangerous treatments, yet this is changing as research, public demand, and physician acceptance increases (WHCCAMP, 2003). Anderson et al. (2000) suggested that consumer quality assurance is not the prime motivation for requested regulatory barriers, rather their research found that when the supply of alternative practitioners is restricted physicians face less competition and earn higher incomes. Thus, there may actually be a hidden benefit for providers to encourage a more restrictive regulatory regime to govern CM therapies, potentially influencing this positive response to licensing/ regulation.

Health Insurance Coverage for Complementary Medicine

Reported provider beliefs of health insurance coverage for complementary medicine within this study were split, with 50% against coverage and 47% for it. Heightened belief in coverage for complementary medicine had a tendency to came from

providers who reported to be nurse practitioners (77%), female (71%), in private practice (41%), referring to CM practitioners (61%), and in agreement that their patients had increased use of CM in the past year (78%).

Health insurance coverage seems to reflect the level of acceptance within mainstream medicine and amongst the public. Even though the public has been willing to pay out of pocket costs for CM therapies, making health insurance coverage less critical in some opinions, a strong correlation has been shown between coverage and high-frequency of CM therapy use (Wolsko et al., 2002). It seems that reimbursement puts a stamp of approval on a particular therapy and increases its revenue and acceptance by providers and public alike (Cleary-Guida et al., 2001). This has vast implications for the integration of complementary medicine. Prior to health insurance coverage for complementary medicine though, many providers and health professionals are demanding further scientific evidence for these therapies. Health executives, as well as conventional clinicians and managers, are demanding persuasive evidence that complementary medicine can deliver safe and effective treatments that are also cost efficient before they are included in healthcare or covered by insurance (Zollman & Vickers, 1999).

Gordon et al. (1998), found that a majority of (65.6%) primary care physicians and 74.3% of OB clinicians reported an interest in the coverage of CM therapies by their HMO, with the main concern expressed that CM therapies had not been scientifically shown to be effective. This matched study results, with numerous respondents reflecting the following statement in qualitative findings: "Health insurance coverage should only cover basic and necessary care that is outcome proven, data based evidence, not testimonials".

According to Mason et al. (2002) several factors determine the coverage of complementary medicine: clinical efficacy, or research and clinical experience demonstrating few side effects or complications and cost effectiveness; competency, CM practitioners have had nationally accepted training standards of practice; and market differentiation, whether inclusion of CM therapies help their ability to attract enrollees and maintain the existing enrollee base. With a Landmark Healthcare survey (1999) showing 85% of HMOs believe relationships between allopathic and complementary medicines will continue to grow, it seems only a matter of time before health insurance coverage is further adopted. To conclude, Ernst and Fugh-Berman (1999) expressed that "while regulation and training are to be applauded, establishing an evidence base must logically precede regulation and coverage of complementary and alternative medicine". Perhaps this is so, but as discussed below, scientific research of complementary medicine may not be so easy and straightforward.

Demand for Scientific Research on CM

Healthcare providers in this study and those in related studies have voiced a need for further scientific research of complementary medicine. They argue that scientific research is needed prior to heightened use, referral, licensing, health insurance coverage, or integration into mainstream medicine. A lack of evidence in the scientific literature is seen as detrimental to physician's acceptance of complementary medicine (Berman et al., 1995). In conventional medical practice, professional judgment and actions are based on the practitioner's training, experience, and on an accepted and expanded body of knowledge based on research findings published in peer-reviewed journals (Mason,

Leavitt, & Chaffee, 2002). Thus healthcare providers judgments, including acceptance, use, and referral, on complementary medicine are affected by such factors.

Healthcare providers in this study reported a strong belief in the need for further research on complementary medicines. Eighty-one percent agreed that CM therapies have not been adequately tested by scientific trials, 67% stated a need for more rigorous research before used or recommended, and only 15% agreed that efficacy and safety of CM therapies have been demonstrated enough for use. This, along with provider comments on the need for more scientific research prior to CM therapy's licensing and health insurance coverage, displays a majority of study respondents, like those in related literature, want more research completed on complementary medicines.

The National Center on Complementary and Alternative Medicine (NCCAM) was founded to produce research on CM therapies, but ten years later with a hand full of research done, still little is known of the effectiveness and safety of these therapies. As stated in Eisenberg (2001), "despite findings of extensive use of complementary medicine in the US, relatively little is known about the safety, efficacy, cost effectiveness, and mechanisms of action of individual alternative therapies. Increasingly however peer reviewed medical literature is including randomized trials, case studies, and systematic reviews involving such therapies". So research is emerging for complementary medicine but it is slow going and often burdened with insufficiencies and problems in design.

There are several barriers to successful research in complementary medicine. First, funding is difficult to secure considering complementary medicines lacks incentives for investors, as its practices are often non-patent able (Weeks, 1999). Secondly, problems lie in the fact that complementary medicines are not aimed at a single

pathologic process as are conventional therapies, individuals are considered to be unique and research focuses on average responses, and finally, complementary medicine research generally places more emphasis on individuals validation of treatment's effectiveness which goes against randomized placebo controlled trials goals (Clark, 2002). While research has been pin- pointed as a hurdle to cross before any further use, referral, licensing, or coverage is allowed we must remember that fewer than 30% of procedures currently used in conventional medicine have been rigorously tested (Relman & Weil, 1999). Differences between conventional and complementary medicines in terms of frame of reference, beliefs, and philosophical basis may be more of the true hindrances than lack of scientific research.

Integration of CM into the Conventional Medical System

The future integration of complementary medicines into the mainstream healthcare system depends in part on the licensing/regulation, health insurance coverage, and scientific research of CM therapies and also on the emerging changes within the healthcare system itself. Mainstream medicine is constantly undergoing changes as new policies and needs seek to be met. Patient demand for explanations and cures for diseases, especially chronic illness care and prevention, has challenged the healthcare system to act. Complementary medicines have helped to fuel this search for new ways of understanding illness and delivering appropriate healthcare. These new approaches veer from conventional medicine in that "with complementary approaches the body is seen not as a machine, reducible to its constituent parts, but 'holistically' as a system that is fully integrated and interpenetrating (Goldstein, M., 1999)".

Healthcare providers in this study showed a growing openness to integration of complementary medicine into the healthcare system. Forty- five percent of respondents agreed that CM therapies should eventually be integrated into the medical system, while 39% were uncertain, and only 16% disagreed with integration. This is a substantial show of acceptance, given that just ten years ago many healthcare professionals dismissed complementary medicines as 'quackery'. When asked about integration of specific CM therapies, providers reported a strong interest in integrating the following: 47% for nutrition, 45% for relation therapies, 43% for biofeedback, 39% for herbal medicines, 38% for massage, and 35% for acupuncture.

Changes in the healthcare system include increases in for-profit corporate ownership of healthcare organizations (hospitals, supply cos., emergency care facilities, etc), managed care plans that limit care based on necessity, and the specialization of healthcare organizations (Goldstein, M., 1999). These changes suggest that economic efficiency and profit are key determinants in how healthcare is organized and how providers use specific therapies (Clark, 2000). Interestingly, these alterations of cost reduction and producing profit may make the healthcare system ever more hospitable to complementary medicine. Research on cost benefits and feasibility of integration as well as patient safety and therapy efficacy may be needed for continued growth of complementary medicine.

Limitations

The limitations of this descriptive study need to be addressed and discussed. There were many benefits of the methodology used. For instance, administering the survey to a stratified random sampling from a complete list of Montana providers enabled providers across the state to participate. However several limitations did exist:

1) The response rate of healthcare providers was approximately 20% or 156 returned surveys. Confidence in the findings must be tempered by the knowledge that most providers did not respond. Although demographics did not differ significantly from Montana healthcare providers as a whole, a self-selection bias may have occurred for those providers who are more interested in complementary medicine, either positively or negatively.
2) The data for this study were gathered from Montana providers only thus there is a limited ability to compare results across populations from previous research on national samples.
3) The study used only ten out of the more than 100 complementary medicine therapies and the definition given for each may have differed from the respondents perceived meaning.
4) Provider's prior beliefs and exposure to complementary medicine and/ or surveys may have determined initial return.
5) There was no standardized survey instrument to measure provider's attitudes on complementary medicine.
6) The survey was designed to generate descriptive data, limiting the level of data to ordinal for statistical analyses.

Implications for Further Research

Descriptive research aids in obtaining basic understandings of a particular population. Research literature on the topics of healthcare providers in Montana and complementary medicine are scarce. The healthcare provider population of Montana is understudied and therefore needs research to mount data on its demographics and practices. More research is needed on other rural populations in order to compare differences in rural perceptions and practices to urban populations. Complementary medicine is also in need of more research to evaluate it's acceptance, use, and potential for inclusion in the US healthcare system.

Healthcare provider beliefs and practices of complementary medicine can have a vital impact on its future within the changing healthcare system. This study has provided some insights into the rural population of healthcare providers in Montana and their perceptions and practices relating to complementary medicine, which may exemplify related findings but cannot be generalized to other providers or states. Though this research is valuable, more research is necessary to amplify these findings and to deliver further scientific evidence to produce an adequate knowledge base of these CM therapies.

In order to better assess the effectiveness and safety of specific complementary medicine therapies, randomized scientific trails on specific therapies are needed. This will require sufficient research methods as well as funding. As the public greatly affects acceptance and thus funding for complementary medicine therapies, their use of CM therapies in Montana and other individual states should be studied more extensively.

Further inclusion of complementary medicine into the healthcare system will come only after efficacy and safety as well as cost to benefit analysis has been completed

for CM therapies. In addition, further research relating to the licensing/regulation and health insurance coverage of CM practitioners is necessary to better grasp issues relating to integration. Investigating current practices that demonstrate integration of complementary medicine in hospitals, clinics, and policies would be important for research in this state and others. Such studies could enable a clearer picture to be painted of the current status of complementary medicine integration and aid in developing ways to make a smoother progression towards this end.

Conclusions

This study of Montana healthcare providers represented an ample cross section of providers in a rural state. There has been little research done on complementary medicine with similar healthcare provider populations, thus these findings may serve as a baseline for comparison of future research. More positive perceptions and practices of rural providers towards complementary medicine may be evidenced through this study. Rural populations may have a more accepting attitude towards traditional or folk remedies, such as complementary medicine therapies, but further research is needed to explore this. These results suggest that Montana healthcare providers, like many in the nation, are changing in their perceptions, interest, referral, and use of complementary medicines.

Healthcare providers have and will continue to play a key role in determining the changes emerging in the healthcare system. Complementary medicine's acceptance, regulation, health insurance coverage, provider use, public use, and provider referral are vital issues in the future inclusion or integration of complementary medicine therapies into conventional medicine. This study and previous research have demonstrated the growing interest in complementary medicines, even in this rural and mostly conservative

state of Montana. The fact that acceptance and use is increasing in spite of the apparent lack of scientific evidence, healthcare provider education or training in complementary medicine therapies, or licensing and health insurance coverage for complementary medicine is extremely telling.

In conclusion, there is no doubt that the US healthcare system is bustling with changes. Healthcare policies, laws, and procedures are attempting to adapt to the changing values of society. Political and social values of health and healthcare are altering here in the US and abroad. Complementary medicine will most likely continue to be used and demanded by the public as well as healthcare providers, and thus some form of integration of complementary and conventional systems of medicine is inevitable. Remaining questions lie only in how best to accommodate these changes, thereby producing and maintaining a quality healthcare system for healthcare providers, complementary medicine practitioners, and the general public alike.

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Appendix A

Survey Instrument

Survey #: _____ *[Please check box to indicate answer.]*

1. Gender: ☐ Male ☐ Female **2. Age:** ☐<34 ☐ 35-44 ☐ 45-54 ☐ 55-64 ☐>65 **3. Are you predominately in:** ☐ Private Practice ☐ Hospital-based Practice ☐ Academic ☐ HMO ☐ Clinic ☐ Public Health ☐ Other? _____ **4. Years in practice:** _____

5. Are you a: ☐ Physician ☐ NP ☐ PA

6. Montana County where you conduct most of your practice: _____

To what extent do you agree or disagree with the following statements on CM Therapies? ***Please mark (X) to indicate your choice***

Complementary medicine therapies as a whole.....	**Strongly Agree**	**Agree**	**Uncertain**	**Disagree**	**Strongly Disagree**
7. work by stimulating the body's natural healing mechanisms.					
8. include ideas and methods from which conventional medicine could benefit.					
9. are useful supplements to conventional medical therapies.					
10. are more useful than biomedicine in treating some conditions.					
11. are useful for treating patient's chronic health problems and complaints.					
12. are generally a threat to public health and to the patients who use them.					
13. have not been adequately tested by scientific trials.					
14. require more rigorous research before they can be used or recommended.					
15. may be safer to use than many pharmaceutical drug options.					
16. efficacy and safety have been demonstrated well enough for use.					
17. should be administered only by medically trained personnel.					
18. work largely because of the time and attention spent with patient.					
19. demonstrated effects are due primarily to the treatment's placebo effects.					
20. should be offered to healthcare providers as continuing education units(CEU).					
21. are being used by increasing numbers of physicians/ providers in practice.					
22. have been used by increasing numbers of my patients in the past year.					
23. have recently seen an increase in referral requests from my patients.					
24. are being used by patients as a supplement to conventional medicine.					
25. should be regulated and/ or licensed to ensure consumer safety.					
26. should eventually be integrated into the mainstream medical system.					
27. are of little real interest or use to me or to my patients.					

The following questions relate to specific complementary medicine therapies. Refer to the definitions sheet provided if you need clarification on the scope or meaning of any complementary medicine therapy.
(Please circle your response (1-5) after each specific complementary therapy.)

28. In general what do you believe to be the *therapeutic value* of the following complementary therapies?

	High	*Moderate*	*Uncertain*	*Low*	*None*
Acupuncture:	1	2	3	4	5
Aromatherapy:	1	2	3	4	5
Biofeedback:	1	2	3	4	5
Chiropractic:	1	2	3	4	5
Herbal Medicines:	1	2	3	4	5
Homeopathy:	1	2	3	4	5
Massage therapy:	1	2	3	4	5
Naturopathy:	1	2	3	4	5
Nutritional therapy:	1	2	3	4	5
Relaxation therapy:	1	2	3	4	5

29. What *level of safety* do you believe the following complementary therapies to have?

	High	*Moderate*	*Uncertain*	*Low*	*None*
Acupuncture:	1	2	3	4	5
Aromatherapy:	1	2	3	4	5
Biofeedback:	1	2	3	4	5
Chiropractic:	1	2	3	4	5
Herbal Medicines:	1	2	3	4	5
Homeopathy:	1	2	3	4	5
Massage therapy:	1	2	3	4	5
Naturopathy:	1	2	3	4	5
Nutritional therapy:	1	2	3	4	5
Relaxation therapy:	1	2	3	4	5

30. What is your *training level (from medical school or Continuing Education Units/CEUs)* in the following complementary therapies?

	High	*Moderate*	*Uncertain*	*Low*	*None*
Acupuncture:	1	2	3	4	5
Aromatherapy:	1	2	3	4	5
Biofeedback:	1	2	3	4	5
Chiropractic:	1	2	3	4	5
Herbal Medicines:	1	2	3	4	5
Homeopathy:	1	2	3	4	5
Massage therapy:	1	2	3	4	5
Naturopathy:	1	2	3	4	5
Nutritional therapy:	1	2	3	4	5
Relaxation therapy:	1	2	3	4	5

31. What is your *level of personal use* of the following complementary therapies?

	High	*Moderate*	*Uncertain*	*Low*	*None*
Acupuncture:	1	2	3	4	5
Aromatherapy:	1	2	3	4	5
Biofeedback:	1	2	3	4	5
Chiropractic:	1	2	3	4	5
Herbal Medicines:	1	2	3	4	5
Homeopathy:	1	2	3	4	5
Massage therapy:	1	2	3	4	5
Naturopathy:	1	2	3	4	5
Nutritional therapy:	1	2	3	4	5
Relaxation therapy:	1	2	3	4	5

32. What is your *level of professional or clinical use* of the following CM therapies?

	High	*Moderate*	*Uncertain*	*Low*	*None*
Acupuncture:	1	2	3	4	5
Aromatherapy:	1	2	3	4	5
Biofeedback:	1	2	3	4	5
Chiropractic:	1	2	3	4	5
Herbal Medicines:	1	2	3	4	5
Homeopathy:	1	2	3	4	5
Massage therapy:	1	2	3	4	5
Naturopathy:	1	2	3	4	5
Nutritional therapy:	1	2	3	4	5
Relaxation therapy:	1	2	3	4	5

33. What do you believe the *value* would be of including the following therapies *in initial medical school training*?

	High	*Moderate*	*Uncertain*	*Low*	*None*
Acupuncture:	1	2	3	4	5
Aromatherapy:	1	2	3	4	5
Biofeedback:	1	2	3	4	5
Chiropractic:	1	2	3	4	5
Herbal Medicines:	1	2	3	4	5
Homeopathy:	1	2	3	4	5
Massage therapy:	1	2	3	4	5
Naturopathy:	1	2	3	4	5
Nutritional therapy:	1	2	3	4	5
Relaxation therapy:	1	2	3	4	5

34. What *level of interest* do you have of integrating some of the following complementary therapies into your practice or workplace?

	High	*Moderate*	*Uncertain*	*Low*	*None*
Acupuncture:	1	2	3	4	5
Aromatherapy:	1	2	3	4	5
Biofeedback:	1	2	3	4	5
Chiropractic:	1	2	3	4	5
Herbal Medicines:	1	2	3	4	5
Homeopathy:	1	2	3	4	5
Massage therapy:	1	2	3	4	5
Naturopathy:	1	2	3	4	5
Nutritional therapy:	1	2	3	4	5
Relaxation therapy:	1	2	3	4	5

35. Which of the following factors contributed to your above reported beliefs of complementary therapies: ***(Please check all that apply)***

- ☐ Personal experience
- ☐ Family related experience
- ☐ Clinical experience/ observation
- ☐ Scientific trials/ Research
- ☐ Patient endorsement or Patient requests
- ☐ Endorsement from other providers/ general practitioners
- ☐ Professional training
- ☐ Media attention to therapies
- ☐ Exposure from lecture/ continuing education course
- ☐ Other (please specify) _____
- ☐ Not applicable

36. Did you have courses on complementary medicine in your initial medical school training?

- ☐ No
- ☐ Yes ***If yes, in what specific complementary therapies?** _____

37. Do you refer patients to practitioners (other than physicians, PAs, and NPs) for complementary therapies?

- ☐ No
- ☐ Yes *** Estimate referral frequency: _____ % per month**

38. Which of the following health complaints would you consider recommending/ referring patients to for treatment by a complementary medicine practitioner?
(Please check all that apply)

- ☐ Addictions- drug/ alcohol
- ☐ Allergies
- ☐ Arthritis
- ☐ Asthma
- ☐ Back problems
- ☐ Chronic pain
- ☐ Fatigue
- ☐ HIV/ AIDS
- ☐ Irritable bowel syndrome
- ☐ Menstrual problems
- ☐ Migraine/ Headache
- ☐ Musculoskeletal problems
- ☐ Psychological disorders
- ☐ Stress & Anxiety disorders
- ☐ Weight problems
- ☐ Other: _____

39. Do you believe that complementary medicine practitioners should be licensed and/ or regulated?

- ☐ No
- ☐ Yes
  - **How does the licensing status of a complementary medicine practitioner influence your referral to them?**
    (Please answer below)

_____

_____

_____

_____

_____

40. Do you believe that complementary medicine therapies should be covered by health insurance plans?

- ☐ No
- ☐ Yes
  - **How do you think that health insurance coverage, or lack of, for complementary therapies influences its use, acceptance, and inclusion into the healthcare system?**

    (Please answer below)

_____

_____

_____

_____

_____

Thank you for completing this survey. Please return the survey in the self-addressed business reply envelope provided. Your valuable help in completing this process in a timely manner is appreciated.

Appendix B

Institutional Review Board Approval

For Internal Use Only

#100-03

The University of Montana

INSTITUTIONAL REVIEW BOARD (IRB) CHECKLIST

(Rev. 7/00)

Submit one completed copy of this Checklist, including any required attachments, for each course involving human subjects. The IRB meets monthly to evaluate proposals, and approval is granted for one academic year. See *IRB Guidelines and Procedures* for details.

Project Director: Kathryn Anne Mills Dept.: Health & Human Performance Phone: 360-2501

Signature: Kathryn A. Mills Date 6-2-03

Co-Director(s): NA Dept.: Phone:

Project Title: Complementary Medicine: Perceptions and Practices of Healthcare Providers

Project Description: This is a descriptive study designed to investigate the perceptions, use, referral, and training level of complementary medicine by healthcare providers (physicians, physicians assistants, and nurse practitioners) in Montana. A survey will be mailed to a random selection of active, instate providers of healthcare providers.

All investigators on this project must complete the NIH self-study course on protection of human research subjects. Certification: I/We have completed the course - (Use additional page if necessary)

Signature	Date	Signature	Date
Kathryn A. Mills	6-2-03		

Students Only:

Faculty Supervisor: Dr. Laura Dybdal Dept.: Health & Human Performance Phone: 243-6988

Signature:

(My signature confirms that I have read the IRB Checklist and attachments and agree that it accurately represents the planned research and that I will supervise this research project.)

For IRB Use Only

IRB Determination:

_X_ Approved Exemption from Review #2

_ Approved by Administrative Review

____ Full IRB Determination:

- ____ Approved
- ____ Conditional Approval (see attached memo)
- ____ Resubmit Proposal (see attached memo)
- ____ Disapproved (see attached memo)

Signature IRB Chair Date: 6/6/03

Appendix C

Study Introduction Letter

To Healthcare Providers

Dear Montana Healthcare Provider,

Hello. Please take a moment to complete the enclosed survey. Researchers at The University of Montana are investigating the issue of Montana health care provider perception, use, referral, and training level of complementary medicine. *Complementary medicine* is defined as "interventions neither taught widely in medical schools nor generally available in hospitals, reimbursed by insurance companies, or included in conventional medical practice". For this study 10 such complementary medicine therapies have been included. *Definitions for each complementary therapy are listed on the back of this letter.*

Results from this study will provide important statewide information to your profession. Please answer these brief questions to the best of your ability. It should only take about 10 minutes. You have total anonymity to answer honestly, as surveys have been coded by number and once returned will not be linked to your name and address. Once completed, please return responses in the enclosed pre-stamped and addressed envelope. Thank you for your time.

To have final study results sent to you please indicate so by checking the 'Yes' box on the pre-stamped & addressed yellow postcard enclosed.

Please return this survey within 1 week of receipt. All responses should be returned by August 8th, 2003. Thank you for your prompt response.

If you have any questions or comments regarding this study, please call Kathryn Mills at: # (406) 360-2501.

Respectfully,

Kathryn Anne Mills
Health & Human Performance
The University of Montana

Appendix D

Definition Page for

Complementary Medicine Therapies

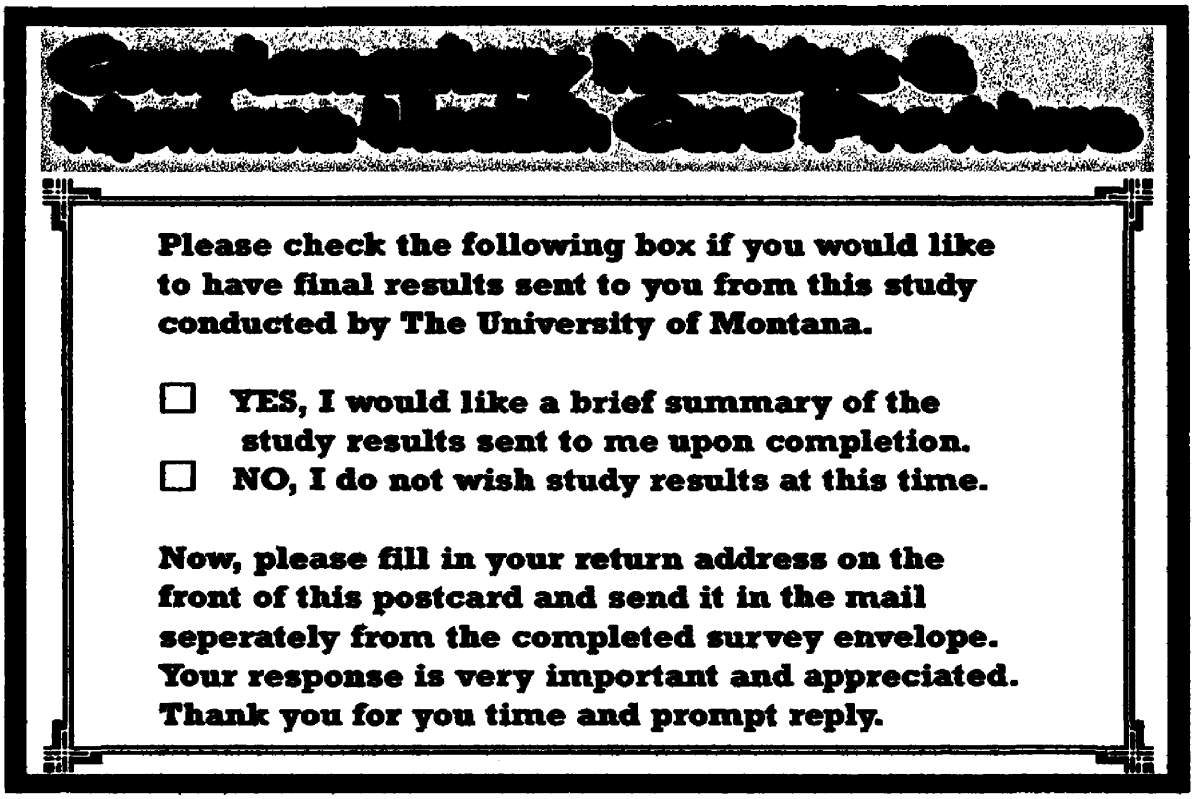
DEFINITIONS: of Complementary medicine therapies

Acupuncture- an ancient Chinese art that uses inserted needles into points along the meridians, or energy pathways, related to various organs in order to stimulate the flow of chi energy and facilitate the body's own healing mechanisms (Janiger & Goldberg, 1993).
Aromatherapy- the use of distilled essential plant oils to influence body, mind, or spirit (Clark, 2000).
Biofeedback- the technique of using equipment (usually electronic) to reveal to individuals some of their internal physiological events, normal and abnormal, in the form of visual and auditory signals to teach them to control these otherwise involuntary or unfelt events by manipulating the displayed signal in order to induce relaxation (Hartz, 2000).
Chiropractic- the focus on the relationship between the structure of the spine and its function, and how this affects the preservation and restoration of health, while using manipulation as the primary treatment tool (NCCAM, 2001).
Herbal medicine- crude drugs of vegetable origin utilized for the treatment of disease states, often of a chronic nature, or to attain or maintain a condition of improved health (Robbers & Tyler, 1999).
Homeopathy- a system developed in Germany based on the principle 'like cures like' that uses diluted small doses of specifically prepared plant extract and minerals to stimulate the body's defense mechanisms and healing processes in order to treat illness (NCCAM, 2000).
Massage Therapy- the systematic manipulation of the body tissue to produce beneficial effects on the nervous and muscular systems, local and general circulation, the skin, viscera, and metabolism (Clark, 2000).
Naturopathy- a complete medical system that views disease as being caused by alterations in the processes by which the body naturally heals itself which emphasizes health restoration as well as disease treatment by employing an array of healing practices including diet, homeopathy, acupuncture, herbal medicine, hydrotherapy, counseling, and pharmacology (NCCAM, 2001).
Nutritional therapy- nutritional food-based supplements and varying concentrations of chemicals designed to prevent and/ or control illness as well as promote health (NCCAM, 2001).
Relaxation techniques- therapies designed to decrease anxiety and muscle tension by reducing pulse rate and blood pressure through breath and focused muscle tension release exercises (Clark, 2002).

Appendix E

Postcard # 1:

Request for Study Results



Please check the following box if you would like to have final results sent to you from this study conducted by The University of Montana.

☐ **YES, I would like a brief summary of the study results sent to me upon completion.**

☐ **NO, I do not wish study results at this time.**

Now, please fill in your return address on the front of this postcard and send it in the mail seperately from the completed survey envelope. Your response is very important and appreciated. Thank you for you time and prompt reply.

Return Address:

_____

_____

_____

_____

The University of Montana
Dept. of Health and Human Performance
McGill Hall- Room 106 B
Missoula, MT 59812-4536

Appendix F

Postcard #2: Reminder

ATTENTION :

Researchers at The University of Montana recently sent you a letter and survey for an ongoing study on complementary medicine. You were randomly selected from a small sample of Montana healthcare providers to participate in this statewide study. Each individual response is vital to the ultimate success and validity of this study.

- **If you have not yet completed and mailed your survey please do so now. Survey due dates will be extended until we have sufficient return rates.**
- **Thank you for your time and attention in this matter.**

If you need a replacement letter or survey, please contact: Kathryn Mills by email at baguschi@yahoo.com

The University of Montana
Dept. of Health & Human Performance
McGill Hall 106-B
Missoula, Montana 59812-4536

Appendix G

Montana County Map

Montana County Seats