

***REFERRAL PATTERNS BETWEEN
COMPLEMENTARY AND ALTERNATIVE
MEDICINE (CAM) AND CONVENTIONAL
MEDICINE:***

***A SURVEY OF CAM PRACTITIONERS IN
OREGON***

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CERTIFICATION OF APPROVAL

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1. Abstract:

Context.– Complementary and alternative medicine (CAM) providers deliver health care for a significant number of people within the state of Oregon, where there are professional schools and licensure for naturopathic doctors (N.D.), doctors of chiropractic (D.C.), and licensed acupuncturists (L.Ac.). There is a perception that few referrals take place between conventional medicine (CM) and CAM health care practitioners.

Objective.–To document the referral patterns of CAM providers and identify practitioner factors associated with referrals to CM physicians (medical doctors (M.D.) and doctors of osteopathy (D.O.)). Two primary hypotheses were tested. (1) There are few referrals made between CAM and CM health care providers. (2) Referrals to CM practitioners by CAM providers are related to measures of professional contact and inclusion within the established health care system.

Methods.– Cross sectional observational study: A self administered questionnaire was sent to licensed N.D., D.C. and L.Ac. providers in the state of Oregon.

Questionnaire items included referral patterns, practice patterns, demographics, and attitudes toward treatment.

Setting and Participants.–A total of 903 questionnaires were mailed to licensed CAM providers residing within the state of Oregon. To insure anonymity, there were no identifying marks on the questionnaires.

Main Outcome Measures.–Frequency of referrals by CAM providers to medical doctors (M.D.), and attitudes on alternative and conventional therapeutic modalities.

Results.— From a single mailing a total of 336 questionnaires were returned, providing a response rate of 38%. Most respondents (63%) reported they received less than 6 referrals per year from M.D's, while 11% received more than 20 referrals per year. Most respondents reported they refer (seek recommendations for new consultation or advice to return to established care) to M.D. practitioners. Eighty-three percent of D.C's., 73% of N.D., and 64% of L.Ac. respondents reported more than 5 referrals per-year, while 42% of D.C., 35% of N.D., and 20% of L.Ac. made more than 20 referrals per year. Having received referrals from M.D's. was the strongest predictor for CAM practitioners referring patients to M.D's. Other significant predictor variables included remuneration from health insurance companies and attending conventional medicine continuing education. Attitudes of CAM practitioners about the utility of various CM therapies suggests considerable acceptance of selective types of pharmaceutical drug therapy and surgery.

Conclusions.—Most CAM practitioners do refer to CM providers. Predictors for referral from CAM to CM included receiving referrals from CM providers, health insurance remuneration, and attending CM conferences. Further research is needed to address more specifically the level of cooperation and communication between CM and CAM providers.

2. Introduction & Background:

Increasingly consumers are seeking CAM treatment (Eisenberg et al., 1998). In 1997 an estimated 42% of Americans utilized some type of CAM at a cost of about \$27 billion, with an estimated \$21 billion of this for CAM services (Eisenberg et al., 1998). Chiropractic is licensed in all 50 states plus the District of Columbia; in 1998 acupuncture was licensed by 35 states and naturopathy in only 14 states (Studdert et al., 1998). As the use of CAM increases, conventional medicine practitioners need to learn about these treatments including their potential benefits and potential for harm (Berman et al., 2000; Sugerman & Burk, 1998).

Lack of communication between health care providers may adversely affect patient outcomes (Berman et al., 2000), and there is a perception that little communication or referrals take place between conventional and complementary medicine practitioners. CAM is a controversial issue with proponents and critics. It is also a political issue with CAM therapies for the most part exempt from Food and Drug Administration (FDA) oversight (Winslow & Kroll, 1998). As conventional medicine has been striving toward an evidence based approach to treatment, few CAM treatments have undergone large randomized controlled trials showing efficacy or safety (Berman et al., 2000). Patients seeking CAM services have often failed to find help for their conditions by conventional medicine providers (Astin, 1998). Some CAM therapies involving acupuncture, manipulation, and herbal and nutritional therapies have been shown to have efficacy and with few side-effects (Berman et al., 2000). Adverse drug reactions with CM medicines commonly occur

(Lazarou et al., 1998). Complementary medicine treatments, like CM treatments , are not without potential risks, and adverse reactions have been reported such as toxicity, herbal-drug interactions, infections, pneumothorax, and vascular and neurologic injuries (Vilke & Wulfert, 1997; Miller, 1998; Berman et al., 2000).

Several recent studies have examined attitudes of medical doctors toward alternative medical therapies (Astin et al., 1998; Verhoef & Sutherland, 1995; Berman et al, 1995; Ernst et al., 1995), and recent high quality studies have evaluated the efficacy of complementary medicine therapies (Linde et al., 1996; Brazezinski, 1997; Morreal et al, 1996; LeBars et al., 1997; Wilt et al., 1998). A recent study in the US found that patients seek alternative medicine not so much because of dissatisfaction with CM but “largely because these health care alternatives tend to be more congruent with their own values” (Astin, 1998). The use of complementary medicine varies geographically. In Australia about half the general population employs alternative medicines (Abbot et al., 1996). A recent study in Canada found that 54% of general medicine practitioners referred to alternative medicine providers (Verhoef and Sutherland 1995). In the USA, a 1990 survey found that 34% of respondents reported using at least one unconventional therapy in the past year (Eisenberg et al, 1993), and by 1997 this number had increased to 42% (Eisenberg et al., 1998). As a result, many conventional medicine physicians have incorporated elements of alternative medicine therapies into their own practice (Blair, 1995; Berman et al, 1995; LaValley & Verhoef 1995). About one-half of family physicians in the Chesapeake region of the United States found the CAM therapies of acupuncture (57%) and chiropractic (49%) to be legitimate medical practices (Berman

et al., 1995). Most US medical schools now offer courses either elective or required that include some CAM (Wetzel et al., 1998). Conventional medicine physicians have reported divergent attitudes about CAM (Astin et al., 1998; Verhoef & Sutherland 1995; Berman et al., 1995); more specifically whether complementary medical therapies have a role in accepted medical practice, and whether CAM health care services should be provided via traditional health insurance coverage (Lewith 1997).

Patients may request CAM treatments that are beyond the scope of practice of their conventional medicine provider. For example, a cancer patient receiving conventional treatments may request a referral for adjunctive CAM treatments. The CM practitioner may not know to whom to refer. To make such a referral the conventional medicine provider may have concerns that the patient may be dissuaded from continuing the prescribed conventional therapy (e.g., cancer chemotherapy) in favor of a CAM treatment without documented efficacy. The provider may also have concerns that the CAM provider may lack the ability the ability to detect serious complications (for example, deep venous thrombosis) and refer the patient back for treatment. Without these assurances the conventional medicine physician may be concerned about potential harm to the patient. Knowledge of the scope of the practice, professionalism of the practitioner to whom one is referring, and open communication between practitioners is essential when referring to any CAM or CM practitioner. Establishing these relationships can be facilitated by interdisciplinary communication leading to increased understanding of professional services and scope of practice.

Within the scope of conventional medicine, there is no established norm for referring to a CAM provider for any condition. Conventional medicine physicians vary as to their attitudes toward CAM. A 1995 Canadian study found that 21% of general practitioners felt that alternative medicine was a threat to public health (Verhoff & Sutherland), whereas 43% disagreed or strongly disagreed with this view. Regardless of personal opinion, patients do seek CAM services, and CAM providers are licensed by the State. Therefore, the issue is how to provide the best possible patient care. Referrals from CM to CAM practitioners appear to be driven by patient requests. A trial of relatively non-invasive treatments using manipulation, acupuncture or “nutritional supplements” before proceeding to invasive treatment such as elective surgery may be requested of their CM provider by some patients. The CM provider may or may not feel that this is an acceptable approach. They may agree to the request, yet may not feel comfortable offering this option to patients who do not directly request it. Conventional medicine providers may also fear criticism by colleagues or from their established patients.

Can negative consequences occur from a lack of communication or referrals between CAM and CM providers? Complementary medicine treatments are increasingly being sought by the public. Patients, in sensing possible conflicts among providers with different health care beliefs, may be reluctant to disclose that they are seeing other providers or that they are using CAM treatments. Eisenberg et al. (1998) reported that only 38.5% of patients using CAM therapies disclose this information to their CM physician. Without open communication with patients and inter-provider cooperation and communication, untoward consequences may occur such

as (1) missed diagnoses, (2) conflicts between treatments (e.g., drug interactions), and (3) patient confusion about diagnosis and offered treatments which may lead to failure of the patient to return for needed treatment.

This study was designed to examine the current state of referral practices of licensed complementary medicine health care providers in the state of Oregon and examine possible elements that are affecting referrals between CM and CAM practitioners. It is a descriptive study to provide an assessment of practice patterns and referral interaction between complementary and conventional medicine practitioners from the perspective of the complementary providers in the state of Oregon. To the best of my knowledge, the referral pattern of complementary providers in the USA has not been previously reported. Oregon represents a unique geographic area for this study since a significant proportion of the population utilizes CAM services, and all three complementary medicine professions selected for this study are not only licensed by the State, but also have professional schools in Oregon.

To conform to the current terminology, the terms complementary medicine or complementary and alternative medicine (CAM) are used here. The term CAM is commonly used in the literature. These terms are controversial and we found no term that was ideal and universally accepted. For the purpose of this study the term complementary medicine practitioners includes Naturopathic Doctors (N.D.), Doctors of Chiropractic (D.C.), and Licensed Acupuncturists (L.Ac.), licensed within the State of Oregon. The term conventional medicine (CM) is used here, instead of

traditional medicine or allopathic medicine, and refers to both Medical Doctors (M.D.) and Doctors of Osteopathy (D.O.).

Complementary medicine physicians comprise about 14% (D.C.~10%, N.D. ~4%) of all (D.C., N.D., M.D. & D.O.) physicians licensed in the state of Oregon with M.D. comprising ~82%. Lists of licensed complementary medicine practitioners are available from the state of Oregon Licensing Boards for Naturopathic Doctors, Doctors of Chiropractic, and Licensed Acupuncturists.

The purpose of this study was not to determine efficacy of CAM treatments nor to determine outcomes of referrals to CAM providers. Opinions whether or not patients should be seeking CAM treatment also were not addressed. This study will describe the current referral practices between these groups as viewed by CAM practitioners and provide a perspective as to the current relationship between professions. Understanding health care referral practices, attitudes and beliefs of CAM providers may aid in this communication. Conventional medicine and CAM providers may find information of interest as to the frequency of referrals between professional groups and how attitudes about CM or CAM therapeutic modalities compare with their own. Further, both CM and CAM providers may be interested in developing the level of professional interaction that some of their colleagues are reporting. In addition, this study also evaluates referral patterns of CAM providers to CM practitioners for suspected serious conditions. Data regarding this question will be explored based on the number of referrals being made by CAM providers to CM subspecialties such as cardiology and oncology. However, a more thorough

analysis of what conditions are being referred by CAM to CM providers will be addressed in a secondary study.

3. Hypotheses and Specific Aims:

Hypotheses:

- (1) There are few referrals made between CAM and CM health care providers.
- (2) Predictors of referrals to CM practitioners by CAM providers are related to measures of professional contact and inclusion within the established health care system.
 - (a) Naturopathic doctors, D.C., and L.Ac. who receive referrals from CM health care providers are more likely to make referrals to CM providers.
 - (b) Complementary medicine health care providers who attend continuing education presentations by CM providers are more likely to refer to CM health care providers.
 - (c) Complementary medicine health care providers who receive greater income from the health insurance industry are more likely to refer to CM providers.
- (3) Complementary medicine providers' attitudes and beliefs about CM treatments affect the frequency of referral to CM providers.

(a) Complementary medicine health care providers, when referring to CM providers, are concerned about potential for harm to their patients.

(b) Complementary medicine health care providers vary in their attitudes toward CM treatments. Complementary medicine providers with positive attitudes toward CM treatments are more likely to refer to CM providers.

Specific Aims:

1. Measure the self-reported number and type of referrals made by CAM providers to CM health care providers in the State of Oregon.
2. Measure, as reported by licensed CAM providers (N.D., D.C., L.Ac.), the number and source of referrals that they receive from CM providers.
3. Determine which factors affect the referral practices of CAM health care providers (i.e. health insurance remuneration, continuing education exposure to conventional medicine, attitudes toward conventional therapies, concerns about potential for harm to their patients or loss of patients from their practice).

4. Methods:

4a Questionnaire Design:

General Guidelines:

Many clinical epidemiology studies involve the use of questionnaires. Self-administered questionnaires can be relatively inexpensive and can be used to acquire reliable and valid data for a study over a large geographic area (Dillman 1983). Some important disadvantages to self-administered questionnaires include: (1) failure to return the questionnaire and, (2) since respondents cannot ask questions, it is necessary that questions to be written relatively simply. For this study, a self-administered questionnaire was sent to licensed N.D., D.C. and L.Ac. complementary medicine health care providers in the State of Oregon. Licensed complementary medicine health professionals have consulted on the study and provided useful feedback on questionnaire phrasing and design.

The first step in design is to examine the hypotheses and specific questions to be answered by the study, and note the variables that need to be measured. The second step is to determine whether questions or measures may already exist in the literature or draft new/revised questions. Third, questions should be arranged in an order to make them as convenient as possible for the respondents. In general, the more simple relevant questions should be asked first, saving the difficult questions to near the end. Asking general questions first may decrease biasing responses, but in a self-administered questionnaire there is no guarantee that questions will be answered in the order listed.

The questionnaire (Appendix B) was designed to be mailed to licensed complementary health care professionals but could be adapted for mailing to conventional medicine practitioners in the future. For simplicity in filling out the questionnaire and increasing the potential response rate, a combination of mostly closed-ended questions with a few open-ended questions was used. In addition to basic demographic information, the questionnaire addresses the frequency and types of referrals made and received, the percent income received from insurance remuneration for services, the utilization of continuing education provided by conventional medicine providers, perceived concerns over potential harm to patients, and attitudes toward various alternative and conventional therapies.

Lists of licensed complementary medicine practitioners were obtained from the State of Oregon licensing Boards for Naturopathic Doctors (N.D.), Doctors of Chiropractic (D.C.), and Licensed Acupuncturists (L.Ac.). About 300 questionnaires were sent to each of the three groups of practitioners. Because individuals being requested to fill out this questionnaire may not trust the conventional medical community, questionnaires were returned anonymously with no identifying marks in a self addressed envelope. A motivating cover letter was included with the questionnaire (Appendix A). After the questionnaire was written and prior to mailing, the proposal and questionnaire were approved by the Subcommittee on Human Subjects at the Portland Veterans Medical Center.

4b Questionnaire and Specific Aims:

Specific Aim 1 is to measure the self-reported number and type of referrals made by different complementary medicine providers to other licensed health care providers in the State of Oregon. The questions specify that referrals as termed here include verbal recommendations. Questions started from general to more specific. They start with identifying some demographics such as professional degrees and the principal profession and information about the practice environment. Respondents were asked to estimate the number of referrals per year received from CM and CAM practitioners. Check box intervals started at zero with escalating intervals. Respondents were then asked to estimate the number referrals from and to CM specialists per year. A list of the common specialties was provided including check boxes for unknown specialties and a blank for unlisted specialty referrals. Reasons for referral were sought-by as an open-ended question. In addition, reasons for not referring also were requested through an open-ended question.

Specific aim 2 is to measure the number, source and reasons for referrals complementary medicine providers receive from conventional medicine providers in the State of Oregon. To evaluate this, closed questions were asked first to determine the percentage of their practice attributable to referrals in general. Follow-up questions identify the type of health professional making the referral (i.e., complementary or conventional) and estimate the number of referrals received.

Subsequently respondents were asked about the specific number of referrals made to them by conventional medicine subspecialty providers. As in specific aim 1, a list of the common specialties was provided with check boxes for unknown specialties and a blank for unlisted specialty referrals. Reasons for referral were requested by an open-ended question.

Specific aim 3 is to determine which factors affect the referral practices of complementary health care providers. Several health insurance companies have plans that cover complementary medical therapies. Establishing insurance coverage may be an important factor in facilitating referrals between conventional medicine providers and complementary medicine providers. The respondents were asked for their percentage of income derived from reimbursement by health insurance plans. Secondary questions as to which insurance carriers are providing reimbursement are beyond the scope of this study.

Continuing education involving interaction and communication with conventional medicine providers may increase understanding of services provided by both groups, help increase trust and understanding of therapies, and establish contacts for referral. Information regarding this potential factor was addressed as a split question. First, respondents were asked to estimate the number of hours spent attending health care related conferences, meetings or seminars in a year. A follow-up question asked for the percentage of these that were presented by conventional medicine providers. After determining the total number of educational hours spent and the percentage presented by conventional providers, we can determine the

number of hours spent on educational interaction between the two groups. The use of check boxes (e.g. 1-20%, 21-40% etc.) was provided to simplify responses while still yielding a range of time per year spent with conventional medicine education.

Attitudes toward various therapies may be a predictor of referral practices between complementary and conventional medicine health care providers. Several studies have examined attitudes of conventional medicine providers toward alternative medicine therapies (Astin et al., 1998; Berman et al., 1995; Boucher & Lenz, 1998; Ernst et al., 1995; Verhoff & Sutherland, 1995). Complementary medicine providers vary considerably in training and are also likely to vary in attitudes, particularly toward conventional medicine therapies. Previous studies in the literature utilized similar lists of alternative therapies, but I have not located a list in the literature of conventional therapies which may be regarded as controversial by complementary medicine professionals. Therefore I developed a list of approximately 30 items combining both complementary and conventional medicine therapies. Approximately 10 alternative medicine items were listed that would generally be accepted by most complementary medicine providers. Similarly, approximately 10 conventional medicine items were listed that would generally be accepted by most conventional medicine providers. The remaining 10 items are a mixture of alternative and conventional medicine therapies that may be viewed with some controversy.

Referral practices may also be affected by the referring practitioners' concerns about the potential loss of patients from their practice, potential for harm to their patients from CM treatments, possible interactions of CM treatments with their

exiting treatments (e.g., drugs) and concerns over possible malpractice liability. These questions were addressed by the use of check boxes for each (e.g. *not important, somewhat important, moderately important* or *very important*).

4c Data Analysis

Returned questionnaires were given a code number for data analysis purposes. Data were then entered into a computer manually and by a computerized optical reading system (Paper Keyboard 97, ver 3.0 DATACAP, INC.). Data were stored in an ASCII file format and later imported into a spreadsheet program (Microsoft Excel 5.0) and into statistical software (see below). Unless otherwise stated, results are presented as a mean \pm standard deviation (sd) or as a simple percentage of respondents for each profession.

4d Statistical Analysis:

Statistical methods included both parametric and nonparametric methods and logistic regression analysis. For the data in this report statistical significance was defined as $P < 0.05$. Statistical software used included SPSS (6.1 SPSS, Inc.) , SYSTAT (5.2.1 SYSTAT, Inc.) and JMP (3.2.2-SAS Institute, Inc.). Most of the data collected by the questionnaire was in a Likert format yielding ordinal data. This was done to simplify filling out the questionnaire by the respondents and for speeding data entry via an optical scanning device. Transformation of ordinal data was used in univariate and multivariate logistic-regression on several variables.

4e. Ethical Considerations:

The study proposal and questionnaire were approved by the Subcommittee on Human Subjects Committee of the Portland VAMC.

5. Results:

5a Return Rate and Exclusions:

Questionnaires were mailed to 903 Oregon licensed practitioners (N.D. 265; D.C. 328, L.Ac. 310) in 1999. Questionnaires were sent to all Oregon licensed N.D. and L.Ac. practitioners that resided within the State of Oregon (4/99) and to about one-third (every third listing alphabetically) of all the Oregon licensed D.C. residing within the state. Collaborators were excluded from the mailing. Twenty four were returned without forwarding addresses. To insure anonymity there were no identifying marks on the questionnaires and no follow-up questionnaire mailings or post-card reminders were sent. Overall response rate was 38.2%. Of the 336 questionnaires returned, 8 were excluded because the respondent was no longer practicing. Identification of principal profession was determined from the respondent's checked response. If blank this was taken to be the same as their professional degree. Four were excluded because their principal profession was not N.D., D.C. or L.Ac. Seven had multiple degrees without specifying their principal profession. Of these seven, four were classified as N.D. based on their professional degree and conditions they reported being referred to them. Three had second degrees of L.Ac. and one D.C. Principal profession could not be determined for the remaining three respondents, who were excluded from further analysis.

5b Demographics:

After exclusions, the 321 respondents reported their professional degrees as follows: N.D. 107, D.C. 140, L.Ac. 98, M.D. 1, RN or LPN 12, and Other 26. Some of the other degrees reported were Licensed Massage Therapist 13, MSW 2., Midwife 2, DDS 1, DPM 1., Ph.D. 1, and OMD 1. Multiple professional degrees were common, most frequently with the combinations N.D. / L.Ac. (24 respondents) and N.D. / D.C. (11 respondents). Among these multiple degrees, most listed N.D. as their principal profession. Two respondents reported both L.Ac. and D.C. degrees. Respondent demographics are listed in Table 1.

In general, both genders were equally represented in the N.D. and L.Ac. groups, but there was a marked male predominance among D.C.'s. While the number of hours spent in practice per week were similar among groups, D.C.'s. reported seeing over twice the number of patients as N.D.'s. or L.Ac.'s. On average, D.C.'s. had been in practice longer and tended to practice in smaller communities (Table 1).

The source of patients for all groups was predominately from self-referral. Eighty-two percent of N.D.'s., 78% of D.C.'s. and 70% of L.Ac.'s. reported that more than 70% of their practice was self-referred (Figure 1A). Sixty-eight percent of D.C.'s., 61% of N.D.'s., and 52% of L.Ac.'s. reported that 10% or less of their practice came from referrals (Figure 1B).

The three professional groups varied in the amount of reported continuing education. N.D.'s. (n=104) reported an mean \pm standard deviation of 56 ± 41 hours per year, D.C.'s. (n=136) 43 ± 35 hours, and for L.Ac.'s. (n=81) 31 ± 26 hours. These

were found to be significantly different by analysis of variance (ANOVA) with post-hoc Bonferroni t comparisons significant at $P < 0.05$. Respondents then estimated the percentage of this time they spent receiving conventional medicine education (presentations by conventional medicine providers). The minimum of time spent receiving CM education was then estimated from these data. For N.D. a mean \pm sd was 8.1 ± 12.2 hours/year, D.C. 3.9 ± 7.0 hours/year, and L.Ac. 1.3 ± 2.8 hours/year. Comparisons by ANOVA with post-hoc Bonferroni t were significant ($P < 0.001$) except for the comparisons between D.C. and L.Ac.

Health insurance companies are increasingly covering complementary and alternative medicine services. More than one-third of income coming from health insurance remuneration was reported by 50% of D.C., 28% of N.D. and 26% of L.Ac. respondents (Figure 2). In contrast, private pay represented more than two-thirds of the income in 60% of L.Ac., 59% of N.D., and 12% of D.C. practices.

5c Referral Practices:

Referrals Received:

The number of referrals received from other licensed health care professionals was modest in all three groups of complementary providers. Seventy-four percent of N.D., 65% L.Ac. and 53% D.C. respondents reported they received no more than 5 referrals per year from M.D's. D.C's. received the most referrals from CM providers with 17% receiving more than 20 referrals per year followed by 9% of L.Ac. and 6% of N.D. (Table 2A). N.D's. were less likely and D.C's. were more likely to receive referrals from an M.D.

The number of referrals from D.O's. was much less frequent, with 93% of D.C., 92% of N.D., and 89% of L.Ac. reporting fewer than 6 referrals per year (Table 2A). There are relatively few D.O's. in practice in Oregon, with D.O's. representing about 4.8% (Jan 2000, Oregon Board of Medical Examiners) of licensed CM physicians.

Which conventional medicine subspecialties tend to refer to complementary providers? Respondents marked a check-box selecting one of five ranges of frequency of referrals received from a selection of conventional medicine subspecialties. Since the majority of respondents reported 1-5 referrals per year, results are presented as the percent of respondents who received one or more referrals from that subspecialty per year (Table 3A). Among N.D. respondents the subspecialties most frequently making referrals were primary care specialties, osteopathic, gynecology/obstetrics, oncology, and psychiatry. Among D.C. respondents, primary care specialties, orthopedics, neurosurgery, neurology, osteopathic, rehabilitation and sports medicine were more frequent. L.Ac. respondents more commonly reported primary care specialties, osteopathic, rehabilitation, neurology, sports medicine, gynecology/obstetrics and orthopedics.

Referrals made:

How many referrals are made by CAM providers to CM providers per year? Most CAM practitioners reported making referrals (recommendations for new consultation or advice to return to established care) to M.D. practitioners (Table 2B). Doctors of Chiropractic referred the most to M.D's. with 83% reporting more than 5

referrals per year, followed by 73% of N.D., and 64% of L.Ac. Complementary practitioners reported much fewer referrals to D.O's. However, only 4.8% of licensed CM physicians are D.O. in the State of Oregon. Referrals to CM physician subspecialties follows a similar pattern to that of referrals received. The greatest number of referrals made by N.D's. are to primary care providers, cardiologists, and OB/Gyn. Similarly, L.Ac. refer to primary care providers and OB/Gyn but less frequently than N.D. Doctors of Chiropractic also refer to primary care providers and, as might be expected, have a greater percentage of referrals to neurology, neurosurgery, orthopedics and rehabilitation specialists than other complementary providers (Table 3B).

The respondents reported perceived barriers to referrals to conventional medicine providers and to other complementary providers. Greater than 50 percent of respondents reported that potential of harm from consultants' treatment was *very important* for referrals both to conventional and complementary medicine providers (Table 4). However, a greater percentage of N.D. and L.Ac. respondents were concerned about the potential for harm from CM than CAM provider treatments. Most respondents reported concern about treatment efficacy as *moderately important* or *very important*: for referrals to CM this was-70% L.Ac., 67% N.D., 63% D.C.; and for referrals to other CAM this was-73% L.Ac., 63% N.D., 63% D.C. There was relatively little concern (marked *not important* or *somewhat important*) about the possibility of patients not returning to the practice: for referrals to CM this was-85% L.Ac., 73% N.D., 67% D.C.; and for referrals to other CAM providers this was-89% L.Ac., 72% N.D., 77% D.C. The possibility of malpractice

liability or barriers to patients without health insurance were rarely reported as inhibiting referrals.

5d Attitudes toward CM and CAM therapies.

Respondents were asked to give their perspective on the utility of 30 (CM and CAM) therapeutic modalities. For each question respondents could choose one of the following selections (1) *not useful*, (2) *some-what useful*, (3) *moderately useful*, (4) *very useful* and (5) *no opinion*. CAM modalities reported by most respondents to be *moderately useful* or *very useful* included, manipulation for back pain, massage therapy, acupuncture for musculoskeletal complaints, herbal treatment for depression, and nutritional supplements for cancer prevention. In contrast, most CAM providers reported lower levels of usefulness for colonic irrigation, manipulation for internal organ disorders, faith healing, aromatherapy, manipulation for psychological disorders, and urine therapy (Table 5A).

Conventional medicine modalities found by most respondents to be *moderately useful* or *very useful* included, artificial knee replacement surgery, pharmaceutical drug therapy for angina, and pharmaceutical drug therapy for hypertension. In contrast most CAM providers reported lower usefulness for antibiotics for ear infections, nonsteroidal antiinflammatory drug therapy for chronic pain, pharmaceutical cholesterol reducing drugs, spinal surgery for sciatica, long term antibiotic therapy for urinary tract infections, and pharmaceutical drug therapy for weight loss (Table 5B).

5e Associations with referral to M.D's:

The first approach to examine which factors may correlate with referrals to M.D's. was to use Spearman's nonparametric measure of association. This statistical test was chosen because most of the variables were in the form of ordinal data. The variable *attitude toward CM therapies* was a cumulative score of the sum of all answers marked as *moderately useful* or *very useful* for each CM therapy listed in table 5B with a mean \pm sd of 5.5 ± 3.3 and a maximum possible score of 14. Similarly, the variable *attitude toward CAM therapies* was determined for each respondent in the same manner but using the CAM therapies listed in table 5A with a mean \pm sd of 8.4 ± 3.3 and a maximum possible score of 16.

A number of positive associations were found using Spearman's nonparametric measure with combined data from N.D., D.C., and L.Ac. (Table 6A). These included gender (male-positive), number of hours and patients seen per week, years in practice, health insurance reimbursement, estimated hours of CM continuing education, referrals from M.D and positive attitude toward CM therapies. Positive attitudes about CAM therapies had a negative association with referrals to M.D's. No correlation was seen with age, principal profession, practice area population, and concerns about potential for harm or lack of treatment efficacy.

As a second step in this evaluation, univariate logistic-regression analysis was performed, examining the independent variables found to be associated through nonparametric analysis. The dependent variable of referrals to M.D's. was transformed from an ordinal to a dichotomous variable with separation at more than 5 referrals to M.D. per year. Conversion from ordinal to dichotomous

variables was made for income from insurance remuneration of greater than 33%, principal profession D.C. (i.e., D.C.=1, other=0), principal profession N.D., and for more than 5 referrals from an M.D. per year. The other predictor variables included age, gender, number of patients seen per week, years of practice, minimum hours of CM continuing education, positive attitude toward CM therapies, and positive attitude toward CAM therapies. Univariate logistic-regression analysis (SPSS 6.1), identified several variables with significant ($p<0.05$) associations (Table 6B).

Both nonparametric and univariate analysis identified gender associated with referral by CAM to M.D's. Among D.C. respondents, male gender was considerably more frequent, with about four times as many male as female practitioners. Since univariate analysis also identified profession of D.C. as significantly associated, the male gender preference to refer to M.D's. might be actually a result of professional (i.e., D.C.) preference to refer to M.D's. To clarify this, subset analysis was performed using nonparametric (Spearman's) and univariate analysis of N.D. and L.Ac. data. In this subset, excluding D.C's., male gender was still positively associated ($p<0.05$) with CAM referrals to M.D's. suggesting a credible gender association, and suggesting that the association with the D.C. profession could be at least in part a consequence of a gender.

Health insurance remuneration was associated with CAM referral to M.D. as well as with M.D. referrals to CAM by both nonparametric ($p<0.001$) and univariate analysis.

Significant variables seen with univariate analysis were then regressed using multivariate logistic-regression analysis. In this analysis, only three variables were

independently associated with referral to M.D. category. The most important predictor variable for referral was the number of referrals received from M.D's. Other significant predictors in the model were health insurance remuneration (greater than 33% of income) and continuing education from a conventional medicine provider (Table 6C).

6. Discussion:

Data from this study suggest that most complementary medicine practitioners within the state of Oregon make referrals to, and receive referrals from conventional medicine providers. Complementary medicine providers tend to make more referrals to CM providers than they receive. The factor that was most strongly associated with CAM providers referring to an M.D., was receiving referrals from M.D's. Other significant predictor variables included participation in continuing education by conventional medicine providers and receipt of health insurance remuneration for services.

The findings in this study suggest that referrals from CM to CAM practitioners were limited for most providers. While it is difficult to gage these findings since there were no control groups or well established norms for comparison, the number of CM to CAM referrals are lower than previously estimated. Astin et al (1998) examined several international studies about CM attitudes and beliefs about CAM therapies conducted between 1982-1995, and reports rates for CM physician referral for acupuncture 43%, and for chiropractic treatments 40%. However, there was considerable regional variability. In the United States (Chesapeake region), 56% of family physicians referred for chiropractic treatment and 27% for acupuncture (Berman et al., 1995). In this study about 30% of N.D's. and L.Ac's. received no referrals, and most (63%) respondents reported they receive fewer than 6 referrals per year from M.D's. Naturopathic doctors tended to receive fewer, while D.C's. tended to receive more referrals from M.D's. This may be a function of the fact that D.C's. see on average over twice the number of patients per

week as N.D's. or L.Ac's. A small percentage of CAM providers (11%) received over 20 referrals per year.

Demographic data suggests a male predominance among D.C. practitioners and that D.C's. tend to practice in smaller communities than L.Ac's. and N.D's. Doctors of Chiropractic appeared to see significantly more patients per week than N.D's. or L.Ac's.

Almost all respondents (~96%) made at least one referral per year to M.D's. Referrals to D.O's. were much less common, with about 53% of CAM providers making no referrals. However, there are relatively few D.O's. in practice in Oregon compared to M.D's (387 D.O. vs 7621 M.D. as of Jan 2000, Oregon Board of Medical Examiners). Since D.O's. comprise about 4.8% of conventional medicine providers in the State of Oregon, an even lower number of referrals to D.O's could have been expected based on the number of referrals to M.D's (Table 2B). This suggests a possible preference among some CAM providers toward referring to D.O's, particularly among N.D's., with 17% reporting more than 5 referrals per year to an osteopathic practice.

All three professions reported that they tended to refer to primary care specialties. As would be expected, D.C's. also tended to refer to orthopedics, neurology and neurosurgery. Naturopathic Doctors tended to refer more to obstetrics and gynecology, cardiology, oncology, psychiatry and general surgery, typical for subspecialty referrals from CM primary care provider practices. Direct referral to subspecialties such as cardiology, oncology and general surgery (Table 3B) suggests that referrals are being made for more serious medical conditions.

Most respondents reported when making referrals, that they have concerns (*moderately or very important*) about potential treatment efficacy, potential for harm, and potential conflicts with their therapies. In general these were the same whether referring to a CAM or CM provider. However, there was a small difference in reporting greater concern about conflicts with treatment and potential for harm when referring to CM than CAM (Table 4). This may be related to a practice philosophy of utilizing diet and nutrition, with less emphasis on drug treatments.

Nonparametric analysis for association and univariate logistic-regression analysis with CAM referrals to M.D's. identified several positive associations (Table 6 A & B). Most of these associations were modest and not significant predictors with multivariate analysis. Nonetheless several significant associations not found to be predictors with multivariate analysis are of interest. Male gender was positively associated with referral to M.D's. by both nonparametric and univariate analysis. Subset analysis excluding D.C's. (80% male) also demonstrated a significant association suggesting a credible gender association. A recent literature review of CM physician attitudes about CAM, found a gender association in only one survey with females referring more frequently to CAM providers; three other surveys found no difference (Astin et al., 1998). Complementary medicine providers with positive attitudes toward CM therapy were more likely to refer to M.D's. Conversely, CAM providers with more positive attitudes toward CAM treatments were less likely to refer.

Multivariate logistic-regression analysis of referral to M.D's identified three significant predictor variables (Table 6C). All three relate to CM and CAM

networking and communication. The strongest predictor of CAM to M.D. referrals was receiving more than 5 referrals per year from M.D's. This observation would be expected to be a strong predictor of referrals. Health insurance remuneration greater than 33% of income for services was the second strongest predictor. Lastly, contact with CM providers via continuing education was positively associated with referring to M.D's. While these contacts may not only facilitate education about CM, possibly including indications for referral, they may also facilitate referrals via personal CM contacts, establishing trust and setting the stage for further communication and dialog. Referrals from M.D's. and CM education both relate to increased contact/communication (i.e., a professional relationship) with conventional medicine.

Health insurance remuneration for complementary services are provided by some insurance companies for selective policies being sold. These health insurance plans often have a network of physicians (both conventional and complementary) from which patients can choose to seek services. These networks may facilitate referral between providers within the health plan. In addition, remuneration from the health care insurance industry for complementary services may in itself have an effect by changing the relationship from exclusion to inclusion within established health care.

Concern about CM physicians criticizing patients who seek CAM services and treatments was expressed in comments by several respondents. While the number making comments was small this concern has been previously reported by Gray et al.,(1999) for N.D's. and D.C's.

Complementary medicine provider attitudes about conventional medicine therapies suggest considerable acceptance of the utility of many therapies, including pharmaceutical drugs for angina and hypertension, cancer chemotherapy and artificial knee replacement surgery (Table 5A). There was less favorable view of controversial treatments such as pharmaceutical drug therapy for weight loss. However, several well established and accepted conventional medicine therapies were thought to be less useful by many respondents. These included hepatitis B Vaccine and pharmaceutical cholesterol reducing drugs. Of further interest is that the hepatitis B vaccine and the cholesterol lowering drugs pravastatin and simvastatin are included on the Naturopathic Formulary Compendium for Oregon (Jan 2000), suggesting that other treatments may be preferred and/or that there is a reluctance to use these types of treatments.

Attitudes of CAM practitioners about various CAM therapies (Table 5A) suggests that many practitioners find some unconventional therapies less useful such as aromatherapy and colonic irrigation, but there was broad acceptance of the utility of most traditional CAM treatments, such as manipulation and acupuncture. Most respondents reported as moderate or very useful such CAM therapies as manipulation for back pain, massage therapy, acupuncture for musculoskeletal complaints, herbal treatment for depression, and nutritional supplements for cancer prevention. For comparison, beliefs in CAM treatment efficacy among CM physicians has been recently reviewed, with about 50% reporting belief in effectiveness of acupuncture, chiropractic treatments and massage (Astin et al., 1998).

This study has several limitations. First, the number of questionnaires returned was limited. There may have been some mistrust by complementary medicine providers about a study principally conducted by conventional medicine institutions (Oregon Health Sciences University and Portland Veterans Affairs Medical Center). To reduce potential mistrust, no identifying marks were made on the questionnaire to maintain complete anonymity of the respondents and to encourage questionnaire returns and candid answers to the questions. Despite the single mailing, we achieved nearly a 40% response rate. However it is conceivable that response bias might be affecting results, since complementary medicine practitioners who refer more often to conventional medicine providers might be more likely to fill-out and return their questionnaire. There is a possibility of some misclassification among CAM professions, since multiple degrees between these professions was relatively common (12%) with the most combined degrees of N.D./L.Ac. However, most of those with multiple degrees indicated their principal profession and any potential for misclassification would be expected to be small and only effect comparisons between CAM professions, but not affect data analyzed with the professions combined.

An important limitation and concern in making comparisons between these professions is the higher frequency of patients seen per week as reported by D.C., compared to N.D. or L.Ac. While D.C's. tend to receive and make more total referrals to M.D's., they also see over twice the number of patients per week as the other groups (Table 1). We did not attempt to adjust these data for the number of patients seen; since D.C's. may be seeing the same patient more frequently than the

other groups, we do not know the actual number of patients within a practice. Reviewing the number of patients seen per week, and the number of hours in practice per week we can make a rough estimate of the average time spent per patient. For D.C. this was 27 min/patient in contrast to 54 min/patient for N.D. and 60 min/patient for L.Ac. Since some patients feel they do not get enough time with their M.D. physician, the greater amount of time spent by N.D. and L.Ac. per patient may in part be a factor in patients seeking CAM services. Further, more time spent per patient by N.D. and L.Ac. suggests a possibility of a thorough evaluation that could result in the detection of conditions that require referral to CM providers.

Several respondents commented that their attitudes about a particular therapeutic modality would be influenced by the severity of the condition being treated. Interpretation of these data should be viewed with the understanding that responses are influenced by the respondents' perception about potential conditions being treated by the therapy, and that education and understanding about these therapies may vary dramatically.

There has been increasing interest in CAM therapies in recent years, with estimates of 30-50% of the adult population using some form of CAM treatments (Astin et al., 1998). In 1990 an estimated 10% of adults went to a CAM providers with an estimated cost in the billions of dollars (Eisenberg et al., 1998). Many conventional medicine practitioners are interested in learning more about these therapies, and recent research into several CAM therapies have demonstrated efficacy with low incidence of side effects (Morreal et al., 1996; Brazezinski 1998; Linde et al., 1996; LeBars, PL, 1997).

While conventional medicine has demonstrated good evidence on the efficacy of treating a great number of diseases, many conditions remain where little therapeutic options are available or where there is little evidence of CM treatment efficacy. Further, some treatments that are effective may have side effects that a patient may not be willing or able to tolerate. These may be some of the reasons why patients may be seeking CAM services. In Israel, patient disappointment with outcome of CM treatment was the most frequent reason for consulting a CAM practitioner (Bernstein et al., 1996).

Even though most individuals (96%) who see CAM practitioners also have been seeing an M.D., few (38.5%) appear to disclose to their CM physician that they have been utilizing CAM treatments (Eisenberg et al., 1998). Lack of disclosure of CAM therapies may simply be due to their perception that these substances are not drugs or medicines, but may also be a consequence of their concern that their CM practitioner may not understand or criticize them for choosing to seek help from a CAM provider. Patients seem to be aware of the differences in health care philosophy between CM and CAM providers and to perceive a lack of communication between these groups. Cooperation and communication between health care providers is essential to provide optimal health care. Poor communication can lead to mishaps in diagnosis and treatment, and increase the risk of treatment interactions.

Both CM and CAM providers would agree that providing the highest level of health care to patients is the goal. Even though there may be disagreements between CM and CAM providers about treatments and medical philosophy,

increasing communication between the various communities of health care providers is important. It is also important for providers to communicate with their patients even if the provider and patient may have different health care philosophies (Eisenberg, 1997).

This study has not attempted to examine the reasons for patient selection of CAM practitioners. Rather this study has attempted to describe the current state of referral interaction between the CAM and CM communities from the perspective of CAM providers, and to identify CAM practitioners' attitudes toward various CAM and CM therapies. It can be concluded that most CAM practitioners do refer to CM providers. The significant predictors for referral from CAM to CM included receiving referrals from CM providers, health insurance remuneration, and attending CM conferences. All may relate to CM and CAM networking and communication.

This study demonstrates that referrals are made between most CAM and some CM providers. Further research is needed to address more specifically the level of cooperation and communication between CM and CAM providers.

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Table 1. Questionnaire respondent demographics.

Characteristic	N.D.	D.C.	L.Ac.
Identified Principal Profession*	104	136	81
Age (mean ± sd)	44±9	45±8	43±6
Gender			
Male (%)	55(53)	108(81)	38(48)
Female (%)	49(47)	26(19)	42(53)
Practice hours/week (mean±sd)	28±11	32±9	27±10
Number of Patients/week (mean±sd)	31±20	71±44	27±21
Years in practice (mean±sd)	10.1±8.7	14.3±8.3	7.1±6.2
City or town Population (%)			
<2,500	3(3)	3(2)	1(1)
2,500-9,999	4(4)	19(14)	5(6)
10,000-49,999	17(17)	46(34)	17(22)
50,000-150,000	19(19)	26(19)	17(22)
>150,000	59(58)	40(30)	37(48)

* See text for identification if principal profession.

Table 2. Referrals reported by complementary medicine providers.

A. Estimated number of referrals (percent) received from conventional medicine providers per year.

Number of Referrals Received per Year from:	N.D. (n=104)	D.C. (n=132)	L.Ac. (n=81)
Medical Doctor (M.D.)			
0	29.8	12.1	27.2
1->5	44.2	40.9	38.3
6->20	20.2	30.3	25.9
21->50	3.8	13.6	4.9
>50	1.9	3.0	3.7
Doctor of Osteopathy (D.O.)			
0	63.5	65.2	64.2
1->5	28.8	28.0	24.7
6->20	7.7	5.3	7.4
21->50	0.0	0.8	1.2
>50	0.0	0.8	2.5

B. Estimated number of referrals (percent) made each year to conventional medicine providers per year.

Number of referrals made per year to:	N.D. (n=104)	D.C. (n=135)	L.Ac. (n=81)
Medical Doctor (M.D.)			
0	2.9	2.2	6.2
1->5	24.0	14.8	29.6
6->20	38.5	40.7	44.4
21->50	22.1	29.6	13.6
>50	12.5	12.6	6.2
Doctor of Osteopathy (D.O.)			
0	43.3	57.8	58.0
1->5	31.7	25.9	29.6
6->20	16.3	9.6	7.4
21-50	7.7	5.9	2.5
>50	1.0	0.7	2.5

Table 3. Conventional medicine subspecialty referrals reported by CAM practitioners.

A.

Referrals received by CAM providers from conventional medicine subspecialties. Data shown is percentage of respondents receiving *one or more* referrals per year from subspecialties as indicated for each identified principal profession.

	N.D. (n=105)	D.C. (n=135)	L.Ac. (n=81)
Primary Care Practice	62	80	63
Osteopathic Practice	30	31	31
Orthopedics	11	46	21
Neurology	12	37	25
Gynecology/Obstetrics	27	19	25
Rehabilitation	13	28	25
Sports Medicine	8	24	25
Neurosurgery	4	38	10
Oncology	26	4	19
Psychiatry	22	7	10
Pediatrics	18	11	4
Rheumatology	12	6	12
General Surgery	12	7	7
Cardiology	10	3	1
Specialty Unknown	4	4	6
Other	6	8	9

B.

Referrals made by CAM providers to conventional medicine subspecialties. Data shown is percentage of respondents referring *more than 5* patients per year to subspecialties as indicated for each identified principal profession.

	N.D. (n=100)	D.C. (n=130)	L.Ac. (n=75)
Primary Care Practice	39	64	48
Orthopedics	12	51	17
Gynecology/Obstetrics	37	17	21
Neurology	8	45	8
Neurosurgery	4	37	3
Osteopathic Practice	17	9	12
Rehabilitation	4	22	11
Cardiology	19	12	0
General Surgery	14	13	3
Oncology	14	5	5
Pediatrics	13	7	4
Sports Medicine	3	8	12
Psychiatry	12	2	7
Rheumatology	5	5	4
Dermatology	5	0	0
Gastroenterology	3	0	1
Specialty Unknown	0	2	0
Other	3	2	3

Table 4. Levels of concern when making a referral to a conventional medicine (CM) provider or another complementary medicine (CAM) provider. Results shown indicate the percentage of respondents selecting *very important* as the level of concern.

Level of Concern: <i>Very Important</i> (%)	N.D. (n=98)		D.C. (n=127)		L.Ac. (n=73)	
	CM	CAM	CM	CAM	CM	CAM
Referral to:						
Consultant may institute a treatment that you feel has no efficacy.	42	42	40	37	39	50
Consultant may institute a treatment that may conflict with your treatment.	40	30	30	29	29	27
Consultant may institute a treatment that is harmful.	62	51	62	58	69	61
Patient may not return to your practice.	12	9	10	6	3	4
Patient may not have health insurance coverage	16	9	5	4	13	15
Possibility of malpractice liability by referring	2	6	6	8	4	5

Table 5. Attitudes about CAM and CM treatment modalities. Choices included, *not useful, some-what useful, moderately useful, very useful* and *no opinion*. Data shown is the percent response for each profession as indicated (N.D. n=103, D.C. n=132, L.Ac. n=79).

	Not useful or No opinion			Moderate or very useful		
	N.D.	D.C.	L.Ac.	N.D.	D.C.	L.Ac.
A. Selected CAM Therapies						
Manipulation for back pain	0	0	2	93	100	83
Massage therapy	2	0	1	89	91	86
Acupuncture for musculoskeletal complaints	1	5	0	90	60	100
Herbal treatment for depression	1	12	3	88	64	88
Nutritional supplements for cancer prevention	1	13	5	91	56	80
Acupuncture for internal organ disorders	10	27	1	70	45	90
Homeopathic therapies for depression	4	26	20	86	45	66
Biofeedback	6	15	19	77	46	60
Acupuncture for psychological disorders	25	50	2	51	27	90
Therapeutic touch	15	31	19	58	33	63
Colonic Irrigation	12	26	28	40	35	46
Manipulation for internal organ disorders	22	8	39	34	49	29
Faith healing	22	34	28	42	31	33
Aromatherapy	39	58	36	17	10	25
Manipulation for psychological disorders	57	38	62	11	29	8
Urine therapy	83	91	82	6	2	10
B. Selected CM Therapies						
Artificial knee replacement surgery	13	3	8	70	85	74
Pharmaceutical drug therapy for angina	5	18	10	69	67	70
Pharmaceutical drug therapy for hypertension	11	9	8	56	63	61
Cancer chemotherapy	13	10	13	47	56	65
Radiation therapy for cancer	10	16	11	46	47	63
Hepatitis B vaccine	19	31	21	42	49	63
Pharmaceutical antidepressant drug therapy	9	12	10	46	47	46
Pharmaceutical oral steroids for asthma	15	18	22	42	44	26
Antibiotics for ear infections	30	24	13	20	35	38
Nonsteroidal anti-inflammatory drug therapy for chronic pain	24	25	20	25	26	20
Pharmaceutical cholesterol reducing drugs	48	31	29	22	26	20
Spinal surgery for sciatica	48	20	51	15	31	13
Long term antibiotic therapy for urinary tract infections	66	65	75	7	11	6
Pharmaceutical drug therapy for weight loss	72	48	74	5	8	3

Table 6. Associations with CAM referrals to M.D's. See text for details.

A. Nonparametric analysis for association Spearman's (n=321). Ordinal data is noted (O).

Variable	Spearman Rho	P
Attitudes about CAM (O)	-0.166	<0.005
Attitudes about CM (O)	0.198	<0.0005
CM Education (minimum hrs/yr)	0.272	<0.0001
Gender (M=0, F=1)	-0.166	<0.005
Insurance remuneration (O)	0.208	<0.0005
Patients per week	0.353	<0.0001
Practice hours/week	0.222	<0.0001
Referrals from MD (O)	0.453	<0.0001
Years in practice	0.192	<0.001

B. Univariate logistic-regression analysis with more than 5 referrals to MD per year as the dependent variable (n=321).

Variable	Odds Ratio	95% confidence	P *
Age (years)	1.00	0.97-1.03	N.S.
Attitudes about CAM	0.95	0.88-1.02	N.S.
Attitudes about CM	1.11	1.02-1.20	<0.05
CM Education (minimum hrs/yr)	1.08	1.02-1.14	<0.01
Gender (M=0, F=1)	0.52	0.31-0.87	<0.05
Health Insurance (>33%) Income †	2.60	1.43-4.70	<0.005
Patients per week	1.02	1.01-1.03	<0.001
Practice hours/week	1.04	1.02-1.07	<0.005
Principal profession DC	2.08	1.21-3.57	<0.01
Principal profession ND	0.88	0.52-1.49	N.S.
Referrals (>5) from MD/year †	7.59	3.50-16.44	<0.001
Years in practice	1.04	1.00-1.07	<0.05

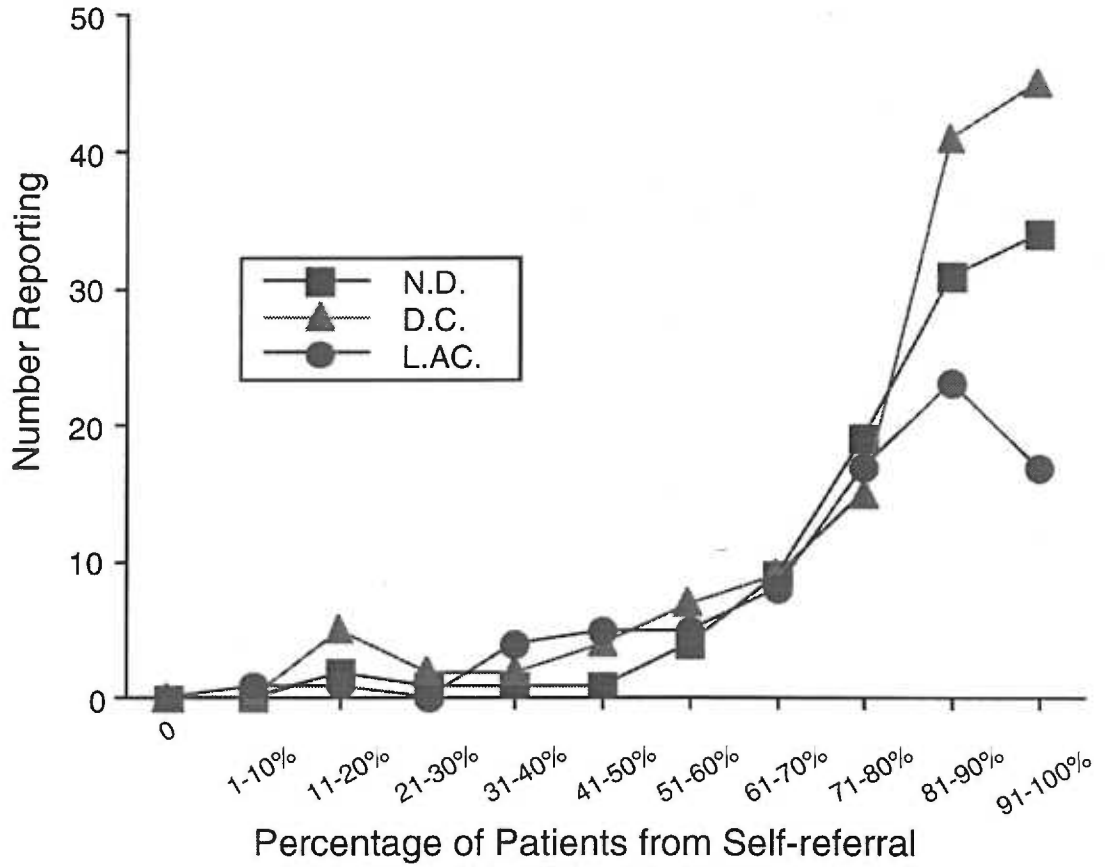
* N.S.=not significant (p>0.05)

C. Multivariate logistic-regression analysis. (N=307)

Variable	Odds Ratio	95% Confidence	P
CM Education (minimum hrs/yr)	1.08	1.01-1.14	<0.05
Health Insurance (>33%) Income †	2.57	1.33-4.96	≤0.005
Referrals (>5) from MD/year †	7.10	3.23-15.61	<0.001

‡ These variables were transformed to dichotomous. (see text for details).

A



B

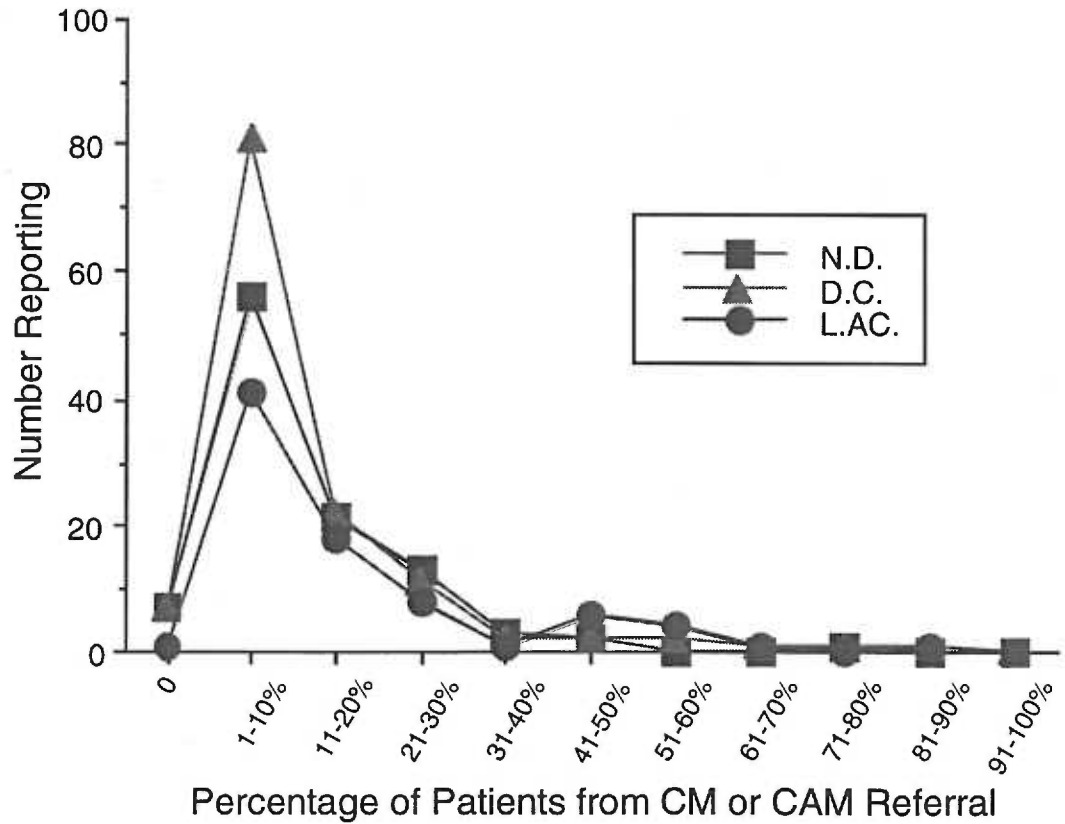


Fig 1.

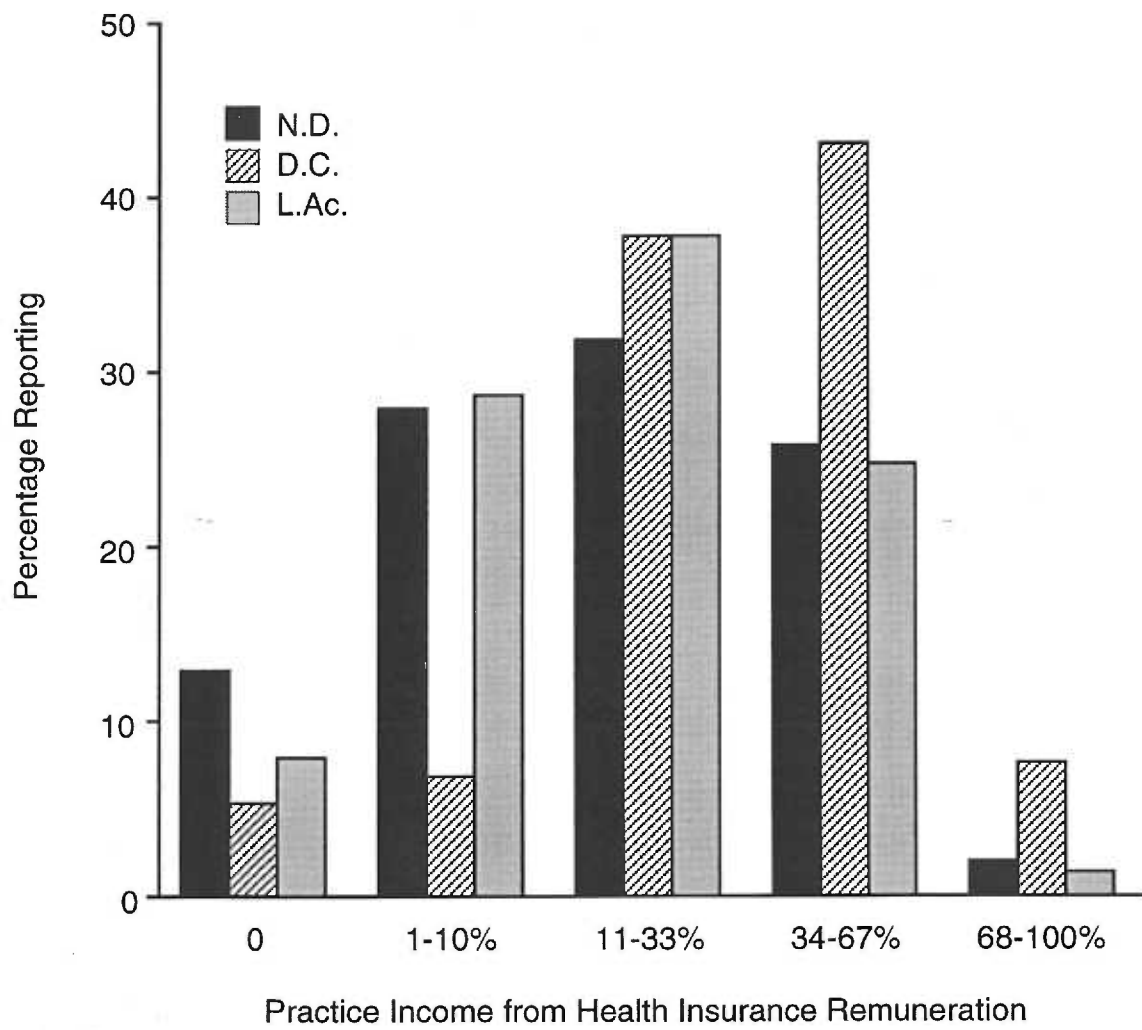


Fig. 2.

9. Figure legends:

Figure 1

Estimated source (percentage) of patients of CAM practice by (A) Self-referral (including recommendations from friends and advertising), and (B) Referral (including recommended) by CM or CAM providers (N.D., D.C., & L.Ac.; n= 103, 130 & 81 respectively)

Figure 2

Estimated percentage of practice income that is reimbursed from health insurance plans (For N.D., D.C., & L.Ac.; n= 101, 133 & 77 respectively).



DEPARTMENT OF VETERANS AFFAIRS
Medical Center
3710 Southwest U.S. Veterans Hospital Road
Portland OR 97207

June 30, 1999

In Reply Refer To:

Dear Health Care Provider:

We have sent this survey to you because you are a licensed health care professional in the State of Oregon. This survey is designed to evaluate current referral practices from the perspective of complementary medicine practitioners. The term complementary medicine is used here instead of alternative medicine or unconventional medicine. We realize that these terms are controversial and we found no term that was ideal and universally accepted. The term conventional medicine is used in this questionnaire, instead of traditional medicine or allopathic medicine, to include both medical doctors (M.D.) and doctors of osteopathy (D.O.).

Cooperation and communication between health care providers facilitates optimal health care. Many people in Oregon utilize both conventional and complementary medicine health care services. There is a perception that little communication or referral takes place between conventional and complementary medicine practitioners. The enclosed questionnaire will be used to characterize referral practices and evaluate factors that may affect referrals between complementary medicine practitioners and conventional medicine practitioners licensed in the State of Oregon.

We would really appreciate your taking the time to fill out this questionnaire. Your response will be anonymous. For meaningful results, it is important that all questions be answered and returned. This is especially important when licensed practitioners within a specialty are few in numbers. The questionnaire is estimated to take less than 10 minutes to complete. Please call (503) 273-5305 if you have any questions. Thank you for your participation.

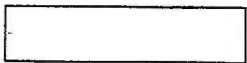
Robert P. Irwin, M.D.
Internal Medicine Fellow
VA Medical Center and Oregon Health
Sciences University

David Hickam, M.D., M.P.H.
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Michael D. Freeman, D.C., Ph.D., MPH
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Preventive Medicine, School of Medicine
Oregon Health Sciences University

Catherine Downey, N.D.
Associate Dean of Clinical Education
National College of Naturopathic Medicine

Natalie K. Arndt, L.Ac., R.N., P.C.
Treasurer, Oregon Acupuncture Association
Former Faculty, Oregon College of Oriental Medicine



Referral Practices Questionnaire

Instructions: Please respond to each question by marking the answer as indicated. For check box responses, please use a simple cross (☒) to denote your answer. If you are unsure about how to answer a question, please give the best answer you can.

1. Please indicate professional degrees you have completed and indicate what you consider your principal professional identity:

	Professional Degrees (Check all that apply)	Principal Profession (Check only one)
Naturopathic Doctor (N.D.)	<input type="checkbox"/>	<input type="checkbox"/>
Doctor of Chiropractic (D.C.)	<input type="checkbox"/>	<input type="checkbox"/>
Licensed Acupuncturist (L.Ac.)	<input type="checkbox"/>	<input type="checkbox"/>
Medical Doctor (M.D.)	<input type="checkbox"/>	<input type="checkbox"/>
Doctor of Osteopathy (D.O.)	<input type="checkbox"/>	<input type="checkbox"/>
Registered Nurse (RN or LPN)	<input type="checkbox"/>	<input type="checkbox"/>
Other _____	<input type="checkbox"/>	<input type="checkbox"/>

2. How many hours per week do you see patients? _____ hours / week.

3. Please estimate the number of patients you see in a week: _____.

4. How long have you been in practice? _____ years.

5. What is the approximate population of the city or town where you practice?

- <2500
 2500-9,999
 10,000-49,999
 50,000-150,000
 >150,000

6. Please estimate the **percentage** of income from your practice that is reimbursed from:

- | | | | | | |
|---------------------------------|-----------------------------|--------------------------------|---------------------------------|---------------------------------|----------------------------------|
| (a) Health insurance plans | <input type="checkbox"/> 0% | <input type="checkbox"/> 1-10% | <input type="checkbox"/> 11-33% | <input type="checkbox"/> 34-67% | <input type="checkbox"/> 68-100% |
| (b) Workers Compensation | <input type="checkbox"/> 0% | <input type="checkbox"/> 1-10% | <input type="checkbox"/> 11-33% | <input type="checkbox"/> 34-67% | <input type="checkbox"/> 68-100% |
| (c) Personal Injury (Auto Ins.) | <input type="checkbox"/> 0% | <input type="checkbox"/> 1-10% | <input type="checkbox"/> 11-33% | <input type="checkbox"/> 34-67% | <input type="checkbox"/> 68-100% |
| (d) Private Pay | <input type="checkbox"/> 0% | <input type="checkbox"/> 1-10% | <input type="checkbox"/> 11-33% | <input type="checkbox"/> 34-67% | <input type="checkbox"/> 68-100% |

7. Approximately what **percentage** of the patients in your practice come from the following sources:

a. **Self-referral** (include recommendations from friends and advertising):

(Mark one box only)

0%	<input type="checkbox"/>		
1-10%	<input type="checkbox"/>	51-60%	<input type="checkbox"/>
11-20%	<input type="checkbox"/>	61-70%	<input type="checkbox"/>
21-30%	<input type="checkbox"/>	71-80%	<input type="checkbox"/>
31-40%	<input type="checkbox"/>	81-90%	<input type="checkbox"/>
41-50%	<input type="checkbox"/>	91-100%	<input type="checkbox"/>

b. **Referred** (recommended) by other health care professionals (conventional or complementary):

(Mark one box only)

0%	<input type="checkbox"/>		
1-10%	<input type="checkbox"/>	51-60%	<input type="checkbox"/>
11-20%	<input type="checkbox"/>	61-70%	<input type="checkbox"/>
21-30%	<input type="checkbox"/>	71-80%	<input type="checkbox"/>
31-40%	<input type="checkbox"/>	81-90%	<input type="checkbox"/>
41-50%	<input type="checkbox"/>	91-100%	<input type="checkbox"/>

8. Please estimate the number of **hours** you spend attending health care related conferences, meetings or seminars **per year**: _____.

Of these, what percentage includes presentations by **conventional** medicine providers?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0%	1-10%	10-25%	26-50%	51-75%	75-100%

9. Please estimate the number of referrals (recommendation for a new consultation with you or advice to return to you for care) **you receive** from each of these licensed health care professionals per year:

Estimate the number of referrals **you receive** per year from:

	0	1-5	6-20	21-50	>50
Naturopathic Doctor (N.D.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Doctor of Chiropractic (D.C.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Licensed Acupuncturist (L.Ac.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Medical Doctor (M.D.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Doctor of Osteopathy (D.O.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Psychology (Ph.D. or M.S.W.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10. Please estimate the number of referrals (recommendation for a new consultation with you or advice to return to you for care) **you receive** from **conventional** medicine providers (M.D., D.O.) per year.

Estimate the number of referrals **received** from each type of conventional medicine provider per year.

	0	1-5	6-20	21-50	>50
Primary Care Practice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Osteopathic Practice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pediatrics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cardiology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
General Surgery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gynecology/Obstetrics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Neurology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Neurosurgery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Oncology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Orthopedics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Psychiatry	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rehabilitation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rheumatology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sports Medicine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Specialty Unknown	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. Please list the most common conditions for which **you receive** referrals from **conventional** medicine providers (M.D. or D.O.).

12. Please estimate the number of referrals (recommendation for new consultation or advice to return to established care) **you make** per year to each of these licensed health care providers.

Estimate the number of referrals (recommendations) **you make** per year to:

	0	1-5	6-20	21-50	>50
Naturopathic Doctor (N.D.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Doctor of Chiropractic (D.C.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Licensed Acupuncturist (L.Ac.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Medical Doctor (M.D.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Doctor of Osteopathy (D.O.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Psychology (Ph.D. or M.S.W.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

** If you do **not** refer to conventional medicine (M.D. or D.O.) health care providers, please skip questions 13, 14 & 15 and go to question 16.

13. Please estimate how many patients **you refer** (recommendation for new consultation or to return to established care) to conventional medicine (M.D. or D.O.) health care providers per year.

Estimated number per year:

	0	1-5	6-20	21-50	>50
Primary Care Practice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Osteopathic Practice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pediatrics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cardiology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
General Surgery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gynecology/Obstetrics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Neurology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Neurosurgery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Oncology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Orthopedics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Psychiatry	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rehabilitation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rheumatology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sports Medicine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Specialty Unknown	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

14. Please list the most common health concerns that have led you to refer patients to **conventional** medicine (M.D. or D.O.) health care providers.

15. When making a referral (recommendation for new consultation or to return to established care) to a **conventional** medicine provider, please indicate the level of **importance** you assign to the following concerns (Please select one box per row).

	<u>Not important</u>	<u>Somewhat important</u>	<u>Moderately important</u>	<u>Very important</u>
Consultant may institute a treatment that you feel has no efficacy.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Consultant may institute a treatment that may conflict with your treatment.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Consultant may institute a treatment that is harmful.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Patient may not return to your practice.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Patient may not have health insurance coverage.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Possibility of malpractice liability by referring.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

16. What would be **your approach** when treating a **NEW** (previously undiagnosed) condition? Please mark your practice of treating and/or referring for the symptoms and conditions listed below.

Select one per row

	Do not see in practice	Usually (>50%) treat in your practice without referral	Usually refer to a complementary medicine provider for consultation	Usually refer to a conventional medicine provider for consultation
Abdominal pain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Acne	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alcohol and drug problems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Allergies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Anemia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Angina	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Arthritis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Back pain (lower)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chest pain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contact dermatitis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dark blood in stool	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Deep vein thrombosis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Depression	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Diabetes Mellitus	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
High Blood Pressure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Migraine Headache	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Muscle spasms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Suspected Myocardial infarction (acute)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Obesity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Otitis Media	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Persistent generalized pain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pneumonia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Postmenopausal vaginal bleeding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pregnancy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sciatica	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Seizures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shortness of breath	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sore throat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Suspected cancer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Syncope	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tobacco use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

17. Please indicate your perspective regarding the therapeutic modalities listed below.

Select One Per Row

Therapeutic Modality	Not useful	Some-what useful	Mode-ately useful	Very useful	No opinion
Acupuncture for internal organ disorders	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Acupuncture for musculoskeletal complaints	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Acupuncture for psychological disorders	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Antibiotics for ear infections	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aromatherapy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Artificial knee replacement surgery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Biofeedback	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cancer chemotherapy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Colonic irrigation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Faith healing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hepatitis B vaccine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Herbal treatment for depression	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Homeopathic therapies for depression	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Long term antibiotic therapy for urinary tract infections	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manipulation for back pain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manipulation for internal organ disorders	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manipulation for psychological disorders	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Massage therapy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nonsteroidal anti-inflammatory drug therapy for chronic pain.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nutritional supplements for cancer prevention	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pharmaceutical drug therapy for angina	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pharmaceutical antidepressant drug therapy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pharmaceutical drug therapy for hypertension	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pharmaceutical oral steroids for asthma	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pharmaceutical cholesterol reducing drugs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pharmaceutical drug therapy for weight loss	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Radiation therapy for cancer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spinal surgery for sciatica	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Therapeutic touch	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Urine therapy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

18. When making a referral (recommendation for new consultation or to return to established care) to a **complementary** medicine provider, please indicate the level of **importance** you assign to the following concerns (Please select one box per row).

	<u>Not</u> <u>important</u>	<u>Somewhat</u> <u>important</u>	<u>Moderately</u> <u>important</u>	<u>Very</u> <u>important</u>
Consultant may institute a treatment that you feel has no efficacy.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Consultant may institute a treatment that may conflict with your treatment.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Consultant may institute a treatment that is harmful.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Patient may not return to your practice.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Patient may not have health insurance coverage.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Possibility of malpractice liability by referring.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

19. If you do **not** refer to conventional medicine (M.D. or D.O.) health care providers, what are the reasons?

20. Please indicate your age _____ years.

21. Gender Male Female

Thank you for your participation.