Nurse Practitioner's Use of Complementary/Alternative Medicine for Women's Health

By

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ABSTRACT

TITLE: Nurse Practitioners' Use of Complementary/Alternative Medicine for Women's Health

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The purpose of this dissertation was to examine nurse practitioners' (NPs') attitudes/beliefs and communication about and their knowledge and use of complementary/alternative medicine (CAM) for women's health. Specific aims were to describe: (a) CAM use by NPs; (b) NPs' attitudes/beliefs regarding the use of CAM; (c) NPs' knowledge of CAM and CAM providers: (d) NPs' training in specific types of CAM; (e) NPs' communication about CAM and the importance of knowing whether their women patients' use CAM; and (f) the factors associated with use of CAM by NPs. Existing allopathic provider studies have been focused on physicians' use of CAM for men and women, although women have been more likely to use CAM. Therefore, a multi-phase process was used to develop a survey tool specifically for this study of NPs' use of CAM for women's health. The final tool had 32-items and focused on 9 types of CAM and 16 women's health conditions.

The survey was mailed to 582 NPs most likely to provide health care to women in Oregon (RR = 60.7%). Use of CAM was measured in terms of NPs' recommending, referring for, or providing CAM. The majority reported using CAM and communicating with their patients about CAM. Respondents most likely to use were 43 to 51 years old,

had practiced less than 21 years as NPs, were certified nurse-midwives, and worked in group office settings without physicians. NPs in non-metropolitan practices were more likely to recommend CAM and reported CAM as more accessible to their patients than those in metropolitan settings. Naturopathy/nutritional, vitamin, and/or herbal supplements were most commonly used; energy healing was least used. CAM was used most often for chronic pain, musculoskeletal/joint problems, headaches and migraines. Use was based on beliefs that CAM enhanced practice options, was within NPs' scope of practice and personal practice philosophy, and was requested by patients.

Respondents were overwhelming positive about the benefits of CAM for women's health but expressed fears of personal liability and jeopardy of their NP license as a result of CAM use. For each of the types of CAM, the majority reported knowledge of their basic principles, 25% to 50% were interested in learning more, and 33% to 75% knew providers to refer to. Few had received formal CAM education; only 24 were licensed/certified CAM providers. Nursing training was among the least likely method used to obtain CAM information. These findings have important implications for nursing education, practice, policy and future research.

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CHAPTER I

INTRODUCTION

Complementary and alternative medicine (CAM) has been practiced in various forms and used worldwide since the beginning of time. Ayruvedic Medicine and Traditional Chinese Medicine have been established for thousands of years as the most ancient known systems of CAM healing (Porter, 1997). In contrast, biomedical science evolved into an allopathic healing system only within the last two or three centuries (Dally, 1997). Within the past century, allopathy has become the dominant health-care practice in the United States (US). Despite the fact that allopathy is recognized as the conventional form of health care in the US, it is considered to be unconventional by the majority of the world's population. In fact, the World Health Organization (WHO) estimates that 80% of the world's health-care consumers rely on CAM as their primary source of health care (Bodeker, 1995).

The prevalence of consumer use of CAM has been well documented in research conducted in Great Britain and Canada (Blais, Maiga, & Aboubacar, 1997; Furnham & Bhagrath, 1993; Furnham & Forey, 1994; Furnham & Smith, 1988; Furnham, Vincent & Wood, 1995; Kelner & Wellman, 1997; Northcott & Bachynsky, 1993; Sutherland & Verhoef, 1994; Thomas, Carr, Westlake & Williams, 1991; Verhoef, Russell, & Love, 1994; Vincent & Furnham, 1996). Recent evidence suggests, however, that Americans are also using health-care practices outside of the conventional allopathic system of health care. In several surveys, one-third to one-half of the US participants reported using CAM most often for wellness promotion and symptom management of chronic,

nonlife-threatening illnesses (Astin, Marie, Pelletier, Hansen, & Haskell, 1998; Bullock, Pheley, Kiresuk, Lenz, & Culliton, 1997; Dunn, 1997; Eisenberg et al., 1998; Eisenberg et al., 1993; Harris, 1987; Landmark Healthcare, 1998; Paramore, 1997). In addition, these surveys indicate that if gender is significantly associated with CAM use, women consistently are more likely than men to use it (Dunn, 1997; Eisenberg et al., 1998; Furnham & Forey, 1994; Harris; Kelner & Wellman, 1997; Thomas et al, 1991; Verhoef et al., 1994).

Since women are known to be more likely consumers of CAM, it is not surprising that they have become targets for CAM-related marketing and information. Such information on women's health is common in advertising, health newsletters, newspapers, women's magazines, retail books, news programs, and on the Internet. Women are bombarded with CAM choices ranging from no-cost therapies to significant expenditures for self-care techniques, over-the-counter remedies labeled "natural," and practices requiring the services of a CAM provider.

Unfortunately, CAM information passed on to women is often based on anecdotal reports and not sound science. Potential harm to women uninformed about possible side effects, untoward interactions, or the scientific efficacy of CAM practices are concerns identified by proponents and critics of CAM alike. Specific concerns have been voiced as a result of a consistent research finding that Americans are using CAM concomitantly with allopathic practices without notifying their allopathic providers (Dunn, 1997; Eisenberg et al., 1998; Eisenberg et al., 1993; Elder, Gillcrist, & Minz, 1997; Paramore, 1997). These concerns focus primarily on possible delays in the provision of proven

allopathic care that may result in unnecessary and even potentially fatal complications; harm or toxicity from contaminants or improper use of a CAM remedy; the costliness of CAM; lack of credentialing of CAM practitioners; and fraudulent and unproven CAM practices that cause psychological harm by raising false hopes (Gates, 1994; Jonas, 1997; Murray & Rubel, 1992; Wetzel, Eisenberg, & Kaptchuk, 1998).

The increased awareness of the prevalence of CAM use among consumers coupled with concerns about its use has generated a growing interest in allopathic provider use of CAM for patient care. In addition, a growing body of research to support the value of CAM is finding its way into allopathic professional journals. A review of the literature indicates that physicians are both interested in CAM and using it in their practices (Astin et al, 1998; Berman et al., 1995; Borkan, Neher, Anson, & Smoker, 1994; Boucher & Lenz, 1998; Blumberg, Grant, Hendricks, Kamps, & Dewan, 1995; Gordon, Sobel, & Tarazona, 1998; Perkin, Pearcy, & Fraser, 1994; Verhoef & Sutherland, 1995). However, the general use of CAM by another important group of primary care providers (PCPs), specifically nurse practitioners (NPs), has been addressed in only one study: with adult primary care clinicians (Gordon et al., 1998).

Significance to Nursing

CAM use is prevalent in the US among health-care consumers. However, with the exception of one study, health-care provider research in the US has focused exclusively on physicians, excluding NPs, who are an important and growing group of PCPs. The numbers of NPs are projected to rapidly increase—from approximately 30,000 in 1990 to 151,000 in 2015 (Cooper, Laud, & Dietrich, 1998). Given this

projected growth of NPs in the health-care workforce and the multiple concerns voiced about CAM use by consumers and allopathic providers who lack knowledge of its efficacy, it is important to assess NPs' knowledge and use of CAM in practice. Because the current research on provider use of CAM has essentially excluded NPs, there is a need to examine NPs' use of CAM.

Purpose of the Study

The overall purpose of this study was to examine NPs' attitudes/beliefs and communications about CAM and their knowledge and use of it for women's health. Specific aims were to describe (a) CAM use by NPs for women's health, (b) NPs' attitudes/beliefs regarding the use of CAM for women's health, (c) NPs' knowledge of CAM and CAM providers, (d) NPs' training in specific types of CAM, (e) NPs' communications about CAM and the importance of knowing whether their women patients use CAM and (f) the factors associated with use and nonuse of CAM by NPs for women's health.

CHAPTER II

REVIEW OF LITERATURE AND CONCEPTUAL FRAMEWORK

This chapter provides a review of the literature on the general use of complementary/alternative medicine (CAM) for patient care by allopathic health-care providers in the US and on the use of CAM for women's health. The limitations of the published research and the significance of this research to the field of nursing, specifically to nurse practitioners (NPs), are also discussed. Four specific domains identified in the research provide the framework for this review. These domains include use of CAM by allopathic providers for themselves and their patients, attitudes/beliefs about CAM, knowledge of CAM, and provider-patient communication about CAM. Initially, key terms are defined, followed by a brief historical overview of the dominance of allopathic medicine in the US. This overview provides insight into the politics impacting CAM research and the dissemination of CAM research findings.

Definition of Terms

Allopathic medicine and CAM have different underlying philosophies and approaches to care. As a result, they are often regarded as two distinctly separate categories of health-care. The terms *allopathy* and *complementary/alternative medicine* are defined and described here to clarify their intended meanings for this study.

Allopathy

The allopathic system of healing is based on a rational system of empirical facts and scientific principals (Fabrega, 1977). "Allopathy" is a term coined by Samuel Hahnemann (1755-1843), the founder of homeopathy, to describe the practices of 19th-

century physicians who used harsh, abrasive therapies on patients with the intent of producing effects different from the disease itself. Popular treatment practices labeled "allopathic" by Hahnemann included emetics, bloodletting, leeching, and purging. Hahnemann's description of allopathy is antithetical to the essence of homeopathy in which the intent of prescribed therapy is to cause symptoms similar to the disease (i.e., "like cures like"). Since the time of Hahnemann, the term *allopathy* has evolved as the common reference for the biomedical practice of Western (mainstream) medicine as taught in the US (Gundling, 1998; Segen, 1998).

Complementary/Alternative Medicine (CAM)

CAM is comprised of a broad spectrum of practices and beliefs that fundamentally differ from allopathy in their underlying theory and treatment practices. However, most CAM practices "share a holistic philosophy of health that extends beyond the strict biomedical paradigm of conventional Western medicine" (Practice and Policy Guidelines Panel, 1997, p. 149).

Historically, CAM healing has been regarded as falling within a symbolic or cultural framework rather than one based on rational thinking. CAM has been recognized as a distinct body of knowledge that deals with social adaptation, deviant behavior, illness, disease, medical taxonomy, folk medical knowledge, and systems of care (Fabrega, 1977). A variety of health-care systems and practices, many of which involve self-care practices integral to a feminist model of care, have been incorporated into CAM. These include, but are not limited to, Ayruvedic medicine, biofeedback and relaxation techniques, chiropractic and osteopathy, energy healing (e.g., Reiki and therapeutic

touch), homeopathy, naturopathy, massage therapy, nutrition (e.g., dietary supplements and nutraceuticals), and Traditional Chinese medicine (e.g., acupressure, acupuncture, and herbal remedies).

The process of describing and defining the field of CAM is ongoing. The terms *alternative, complementary, non-allopathic, nontraditional, unorthodox, and unconventional* have been used interchangeably to refer to the entire body of CAM practices. Most recently, the term *integrative* has been used in reference to CAM for health-care practices that are used alongside conventional, allopathic, medical practices. However, CAM continues to be individually defined by authors for purposes of their own work.

The Office of Alternative Medicine (OAM) of the National Institutes of Health (NIH) has recognized the lack of uniformity among researchers and authors in defining CAM. In 1995, the OAM convened a panel of health-care providers and researchers for the purpose of coming to consensus on a comprehensive definition. The final definition included a description of CAM as a global term referring to a myriad of health practices, beliefs, and systems that are based on non-allopathic philosophies. The following definition from the OAM is being used to guide CAM research at the NIH:

> CAM is a broad domain of healing resources that encompasses all health systems, modalities, and practices and their accompanying theories and beliefs, other than those intrinsic to the politically dominant health system of a particular society or culture in a given historical period. CAM includes all such practices and ideas self-defined by their users as preventing or

> treating illness or promoting health and well being. Boundaries within CAM and between the CAM domain of the dominant system are not always sharp or fixed (Panel on Definition and Description, 1997, p. 50).

Combining the terms *complementary* and *alternative* indicates that these non-allopathic modalities may be used either "together with" (complementary) or "instead of" (alternative) allopathic medicine. Although it is understood that nurses (i.e., NPs) do not practice medicine, for purposes of the research here, the NIH-approved acronym *CAM* will be used to refer to all non-allopathic health practices.

Historical Overview of CAM

Prior to reviewing the literature on CAM, it is important to understand the history of allopathic medicine and CAM in the US. An overview of this history provides insight into the political factors that contributed to allopathic medicine becoming the accepted form of health care practice in the US. The resulting dominance of allopathic medicine has had an impact on CAM research and the dissemination of research findings.

CAM in the 19th Century

In the 1800's, lay medical (i.e., CAM) practitioners coexisted with allopathic practitioners without fear of practice restriction or regulation in the US. The most common types of CAM practitioners included naturopaths, homeopaths, and midwives. Practitioners of allopathy earned little respect and were often sought out as a last resort because of their barbaric practices of bloodletting, leeching, and poisoning. In 1846, a group of allopathically-trained medical providers met to change the status of its practitioners and to develop an elite organization comprised of its own professionals.

This organization came to be known as the American Medical Association (AMA) (Starr, 1982).

CAM in the 20th Century

During the early 20th century, a number of significant events occurred to establish the requirements for a single dominant form of health care in the US—the contemporary biomedical model of medicine, also referred to as allopathic medicine. Groups with decision-making power in the health-care industry successfully orchestrated the dominance of allopathic medicine over a 100-year period. The most influential groups included the AMA, state legislatures, health-care delivery organizations, and the pharmaceutical industry.

Impact of the Flexner Report. In the early 1900's, allopathic physicians were gaining power and prestige. The AMA responded to a continuing proliferation of diverse CAM providers who competed for health-care practice by hiring educator Abraham Flexner to assess the adequacy of allopathic training facilities throughout the country. In 1910, the Flexner Report was published with a scathing critique of the quality and lack of uniformity in education for allopathic providers. As a result of his findings, Flexner recommended a uniform standard of medical education for all physicians, a recommendation that produced the greatest impact on health-care practices to that point in America (Starr, 1982). The Report wielded the power of accreditation to phase out practitioners of CAM by conferring the lowest ratings on educational institutions for homeopaths, naturopaths, and midwives, providers who had long, well-established histories in health care (Jacobs & Moskowitz, 1996). In addition, the backlash of the

Flexner Report had a significant impact on women in health care. Medical schools began to tighten their standards for enrollment and increase their tuition to provide an improved standard of medical education. Women and lower working class individuals were no longer accepted or could no longer afford to be educated in the new, accepted system of medical education. By 1914, all but one of the 17 women's medical colleges had closed, and women comprised only 3% of the medical school population in America (Achterberg, 1990; Starr, 1982). Without the strength of powerful professional organizations to back their health-care practices, CAM practitioners could not withstand the AMA's continued attempts to discredit their non-allopathic practices, and women struggled to regain a role in the healing profession.

Impact of the AMA. Flexner's report created a domino effect that gathered momentum over the remainder of the 20th century. This effect resulted in a shift in the balance of health-care practice, eventually elevating the status of allopathic physicians over CAM practitioners. In 1925, the AMA used its power to establish and claim a scope of practice for allopathic physicians that included diagnosing, prescribing, and treating patients based on empirical science. This scope of practice was supported by state legislatures through the enforcement of AMA standards and guidelines as a measure of acceptable health-care practice. As a result, CAM practitioners who provided care within the scope of practice claimed by allopathic physicians were discredited through state governments on the basis of AMA-initiated regulations (Cassidy, 1996). Unable to claim a basis in science, practitioners of CAM were relegated to a lesser status than

"legitimate" health-care providers (i.e., allopathic physicians), and their freedom to practice CAM was further restricted.

The AMA's attempts to discredit CAM practitioners continued well into the 20th century. This was evident in the code of ethics established by the AMA, which forbade any licensed allopathic physician to provide CAM modalities in practice or to consult with or refer patients to CAM practitioners, such as homeopaths (Coulter, 1973). This state-supported AMA mandate often resulted in legal battles between state medical boards and physicians who used CAM for patient care. Non-compliant physicians were charged with practicing outside of their scope of practice, and as a result, they were often threatened with revocation of their medical licenses. For example, Stanislaw Burzynski, MD, PhD, had a 20-year history of battling the AMA's repeated attempts to discredit him, remove him from practice, and even imprison him for providing a non-FDA-approved anti-neoplaston treatment to cancer patients despite reported success of the treatment (Burzynski, 1998). Ultimately, the judicial system and the court of public opinion exonerated Burzynski. Unfortunately, physicians who integrate CAM modalities into their practices continue to be targeted by the medical community. Within the past decade, cases have been brought against physicians in California (Meza vs. Southern California Physicians Insurers Exchange, No. CO26203, CA Court Appeals 3rd District, 1997) and North Carolina (re Guess, 393 SE2d 833, NC, 1990) in an attempt to revoke their medical licenses for providing homeopathic and herbal remedies to their patients.

Aside from individual cases brought by state medical boards against allopathic physicians practicing CAM, the AMA has a long history of repeatedly accusing the

chiropractic profession of practicing medicine without a license. Throughout most of the 20th century, the AMA has successfully lobbied to restrict the scope of practice of chiropractors. This was effectively accomplished through the AMA's professional code of ethics by forbidding physicians to collaborate with chiropractors. No collaboration meant no referrals. Therefore, patients' access to chiropractors was controlled and limited by a health-care system in which allopathic physicians have acted as gatekeepers. However, the chiropractic profession eventually won the battle against the AMA's control over their scope of practice when antitrust action by the government forced the AMA to rewrite its code of ethics (Brody, Rygwelski, & Fetters, 1996).

Impact of the pharmaceutical industry. The status of physicians was also recognized and capitalized on by pharmaceutical companies. These companies collaborated with allopathic physicians to more effectively market their products to the public (Starr, 1982). This practice has continued and the marketing approach often encourages health-care consumers to discuss product use with their physician.

Summary. Throughout the 20th century, health-care organizations have supported allopathic physicians, initially out of necessity, because physicians offered their services as independent practitioners rather than as employees. Thus, acting on Flexner's recommendations nearly a century ago, the AMA, state legislatures, health-care organizations, and the pharmaceutical industry eventually formed a powerful force to control the direction taken by health care in the US. This was achieved by regulating allopathic medicine as the accepted method of practice for health care in the US. Current definitions of CAM in the literature continue to maintain the basic tenets of the Flexner

Report by regarding CAM as health-care practices that fall outside of the realm of mainstream medical practice (i.e., allopathy).

Politics of Publishing CAM Research

Essential aspects of conducting health-care research include financial support and the dissemination of research findings. Financial support is often essential to begin the research process and follow it through. Once completed, research findings must be disseminated if the research is to be useful to others. Health-related research findings are most widely communicated to health-care providers through professional peer-reviewed publications. Two comprehensive databases used for reviewing literature in the fields of nursing and medicine are CINHAL and MEDLINE. However, the information available through these widely used databases is limited to manuscripts that have been accepted for publication by mainstream professional journals and other forms of published media.

The paucity of CAM literature on provider use of CAM for patient care in these widely used medical and nursing databases is not surprising. The politics surrounding CAM extend beyond the control of how health care is practiced in the US to the types of publications included in these professional health-care databases.

Impact of the AMA

Within the medical community, publication bias in preference of allopathically-based research articles had resulted in the exclusion of virtually all CAM-related literature until very recently. This has partially been achieved by AMA control over ten major medical journals (e.g., AMA Archives Journals and the Journal of the American Medical Association). The failure of CAM research to meet the rigorous standards of

empirically-based scientific testing accepted by the allopathic research community has been cited as a major factor for not publishing CAM research in these highly regarded publications (Fontanarosa & Lundberg, 1998). Interestingly, despite the scientific standards that allopathy claims to uphold, reviews of allopathic research provide evidence to the contrary. Analysis of published allopathic research indicates that only 15% of allopathic medical interventions are based on solid, scientific evidence because only 1% of the articles published in medical journals are scientifically sound (Lock, 1991; Williamson, Goldschmidt, & Colton, 1986). Additional reviews suggest that less than 30% of what allopathy achieves has been tested adequately through randomized controlled trials (RCTs), the "gold standard" for scientific testing and evaluation of allopathic treatment interventions. Ironically, these findings indicate that roughly 70% of allopathic practice relies on the same well-developed clinical observation skills and expertise essential to the models that guide CAM practice (Altman, 1994; Anderson, 1990).

Impact of the Federal Government

Only within the past decade have certain events increased the availability and dissemination of CAM research in the US. One of the major thrusts has come from the federal government. The NIH provided a perception of legitimacy for CAM use with a Congressional mandate to establish the Office of Alternative Medicine (OAM) in 1992. An annual budget of $2 million was granted to investigate the potential of promising CAM therapies. This initial budget has been facetiously described as "homeopathic" because of the infinitesimal amount designated for CAM, specifically 1/5000th of the

entire NIH budget (Murata, 1994). Joseph J. Jacobs, the head of the OAM at that time, noted, "The NIH probably spends more on pencils and pens and stationery than [the] $2 million a year" allocated to CAM (Murata, p. 102).

An increasing interest in CAM eventually resulted in an upgraded status of the OAM to a National Center for Complementary and Alternative Medicine (NCCAM) in 1998, with an annual budget of $50 million in 1999 (Department of Health and Human Services, 1998; Jonas, 1998). This additional funding designated for CAM research opened up research opportunities that were previously restricted because of a lack of adequate financial support, not due to a lack of interest among researchers (NCCAM, 1999). In fact, the first request for applications (RFA) for proposed studies to support the evaluation of the efficacy, safety, outcomes, and cost-effectiveness of CAM received reportedly the largest response in NIH history for a single RFA, with 452 applications submitted (NCCAM, 1999; Rubik, 1995). Through a collaborative effort with the NIH, the NCCAM currently provides funding for 13 specialty research centers to investigate CAM (The Rosenthal Center for CAM, On-line, 4/5/00). Consequently, new methods for testing CAM with respect for the individuality of its treatment practices are being considered (Cassidy, 1994; McGourty & Hotchkiss, 1993).

Impact of Health Care Organizations and Third-Party Payers

Although history suggests that the AMA has acted intentionally to maintain an unequal distinction between CAM and allopathic health-care practices and to restrict CAM research in the US, other forces have permeated the boundaries between allopathy and CAM. As a result, significant changes in health-care practice are currently taking

place. For example, health-care organizations and third-party payers have established control of the health-care system by dictating the types of health-care services offered to consumers. These services are being provided on the basis of cost effectiveness and potential profit rather than physician choice. At a time in which health-care services are being heavily scrutinized for unnecessary expenditures--often resulting in cutbacks, CAM is emerging as a profitable market for the health-care industry. Perhaps the positive response of the NIH, health-care organizations, and third-party payers to public demand for CAM has also had a direct influence on the growing number of CAM research publications available in academic/scholarly allopathic journals and peer-reviewed journals devoted exclusively to CAM.

Impact of Publications for Physicians

The editors of allopathic journals have recognized the growing interest in CAM research among their readers, although evidence suggests this interest is not consistent throughout the allopathic community. Such discrepancy among allopaths is evident from a survey conducted by the Journal of the American Medical Association (JAMA) on desirability of topics to be published in future JAMA issues (Lundberg, Paul, & Fritz, 1998). Survey respondents included two groups: a group of experts (i.e., reviewers and senior staff of JAMA) and a group of JAMA readers (i.e., 500 practicing physicians). The practicing physicians ranked CAM seventh on a desirability scale of 73, indicating a strong interest in future publications about CAM. In contrast, the journal's own reviewers and staff ranked CAM 68th on the same scale.

Despite the notable lack of agreement between JAMA's experts and readers, the AMA called for manuscripts of CAM research to be accepted for publication based on "scientific merit." The stringent criteria for acceptance could be regarded as hypocritical since reviews of published allopathic research indicate failure to meet the same rigorous standards demanded of CAM research, as previously noted. However, in 1998, the editors of the AMA Archives journals and JAMA received over 200 CAM-related manuscript submissions, more than 80 of which passed the stringent scientific review process and were deemed publishable (Fontanarosa & Lundberg, 1998).

Impact of CAM Publications and Internet Sites

The prevalence of CAM research publications in the US is also evident in a growing number of academic/scholarly journals recently created by CAM advocates and researchers. A website devoted to professional journals of CAM listed 39 professional CAM journals (Alchemical Medical Research and Teaching Association, 1997). These journals either offered a general focus on CAM (e.g., Alternative and Complementary Therapies) or included publications for specific CAM providers or about specific CAM modalities (e.g., Homeopath, the Journal of the Society of Homeopaths and The Journal of Chinese Medicine) (Alchemical Medical Research and Teaching Association, 1997). The editors of some of these CAM journals even obtained their initial training in allopathy. For example, Larry Dossey, MD, is the editor of Alternative Therapies in Health and Medicine, and Andrew Weil, MD, serves as editor-in-chief of Integrative Medicine: Integrating Conventional and Alternative Medicine.

Aside from the increased availability of CAM information in academic/scholarly journals, interest in CAM among health-care providers and consumers has resulted in a plethora of Internet sites devoted to CAM, as noted in Alternative Medicine Online (Moss, 1997). Dr. Weil has expanded his message to cyberspace with a reported two million contacts per month by health-care providers and consumers seeking information on CAM (R. Greenfield, MD, FACEP, personal communication, May 13, 1998). It is important to note, however, that many other CAM sites are not screened for accuracy nor endorsed by the medical or CAM community at-large. Therefore, the Internet may be used to promote useless and potentially harmful CAM modalities to unwitting consumers searching for self-care remedies and treatment options. However, the high-risk nature of self-care treatment information on the Internet extends to allopathic self-care opportunities as well. For example, individuals who purchase pharmaceuticals through the Internet may also be self-treating without adequate knowledge of the use of the medications being purchased or the potential risks and benefits of their use.

Impact of Publications for Nurses

In contrast to the historical gate-keeping system of publication bias practiced by the allopathic medical community, nursing journals have published articles on CAM and produced journals with a CAM focus for decades. Two US academic/scholarly nursing journals are devoted to CAM modalities as components of holistic nursing practice: the Journal of Holistic Nursing (since 1983) and Holistic Nursing Practice (since 1985). In addition, CINAHL maintains a database of nursing literature that includes published

research on specific CAM modalities used by nurses for specific health conditions (e.g., the use of herbal remedies for labor by certified nurse-midwives).

Despite the increased focus on CAM in medical literature and despite its historical presence in nursing literature for specific health conditions, survey research on the general use of CAM by NPs in their practices is extremely limited. A review of CINAHL and MEDLINE databases indicates that US studies on health-care providers' general use of CAM have focused nearly exclusively on physicians. Furthermore, these US studies have only been published within the past decade.

Review of Literature on Allopathic Provider Use of CAM

The following section provides an overview of the published research on the use of CAM by health-care providers. First, a review of the literature on allopathic provider use of CAM for patient care is discussed, including the limitations of these studies and the significance of these research findings to nurses, and specifically, nurse practitioners. This is followed by a review of the literature on CAM and women's health. The definition of women's health, concerns about the use of CAM by women, and the conceptual fit between CAM and women's health follow.

International Use of CAM

Surveys of physician use of CAM for patient care outside of the US have been published in foreign medical journals as early as the 1980's (Anderson & Anderson, 1987; Hadley, 1988; Knipschild, Kleijnen, & Reit, 1990; Reilly, 1983; Wharton & Lewith, 1986). The majority have primarily been conducted with allopathic physicians in industrialized countries, including Australia (Hopper & Cohen, 1998), Canada

(Goldszmidt, Levitt, Duarte-Franco, & Kaczorowski, 1995; Verhoef & Sutherland, 1995; Zubek, 1994), Great Britain (Perkin, Pearcy, & Fraser, 1994; Wharton & Lewith, 1986), Israel (Borkan, Neher, Anson, & Smoker, 1994; Schachter, Weingarten, & Kahan, 1993), Germany (Himmel, Schulte, & Kochen, 1993), the Netherlands (Knipschild et al., 1990; Visser, 1990), New Zealand (Hadley, 1988; Marshall, et al., 1990), Scotland (Reilly, 1983), and Sweden (Lynoe & Svensson, 1992).

Researchers who surveyed British and Canadian allopathic physicians' attitudes/beliefs and knowledge about CAM and CAM use reported that 54% (Verhoef & Sutherland, 1995) to 93% (Perkin et al., 1994) of those surveyed provided CAM personally to their patients or through referral. These physicians did so despite their self-reported disbelief in the efficacy of CAM and their lack of knowledge of CAM principles, provider qualifications, research evidence, and potential harmfulness of CAM use (Perkin et al.; Verhoef & Sutherland). However, these researchers did not address why the physicians referred patients to CAM practitioners despite their own lack of knowledge about CAM. Referrals from general practitioners to CAM practitioners were often made based on patient requests (97%) and more commonly occurred at the patient's initial consultation (Verhoef & Sutherland). It seems that the majority of physicians surveyed (up to 75%) recognized a need to become more knowledgeable about CAM by indicating an interest in obtaining education about CAM or including CAM in physician training (Perkin et al.; Verhoef & Sutherland).

However, the findings of allopathic provider use of CAM abroad are not applicable to physicians practicing in the US because many of the international surveys

were conducted in countries with national health-care systems and may reflect cultural practices indigenous to their countries. Many of these systems have already incorporated CAM into their repertoire of health-care services available to all citizens. As a result, when compared with US health care providers, CAM may be more likely to be accepted by health-care providers outside the US; health-care providers in other countries may be more knowledgeable about CAM; and concerns related to liability of provider use of CAM for patient care in countries with national health plans may not be an issue.

Allopathic Providers' Use of CAM in the US

Only within the past decade have studies on the use of CAM by allopathic providers in the US emerged. A cross-cultural study of allopathic physicians in Washington State, New Mexico, and Israel in 1992 was conducted to examine patient referrals for CAM and factors influencing decisions to refer patients to CAM providers (Borkan et al., 1994). Of the 274 questionnaires distributed, 138 (50.4%) were returned. Not surprisingly, primary care specialists referred twice as often as physician specialists; however, no differences in referral rates were noted between sites despite cultural and health-care system differences. An additional finding was that the rate of referral for CAM was not associated with physician belief in the efficacy of CAM, level of knowledge about CAM, or familiarity with CAM. In spite of their reported lack of knowledge about CAM, over 60% of the physicians surveyed had made CAM referrals within the past year. Referrals were based (in order of frequency) on patient requests, patients' cultural beliefs, allopathic treatment failure, and the belief that the patient exhibited "nonorganic" or "psychological" diseases. Nearly half of the physicians

reported using CAM for themselves or their families and one-fourth reported having previously used some CAM therapies in their practices.

Berman et al. (1995) surveyed primary care physicians in the Chesapeake region of the US about their attitudes toward 18 specific CAM practices and their use of CAM. Of the 295 questionnaires distributed, 180 (61%) were returned. The 18 practices defined as CAM in the study were diet and exercise, behavioral medicine, biofeedback, acupuncture, hypnotherapy, massage therapy, megavitamins, vegetarianism, acupressure, prayer, herbal medicine, art therapy, counseling or psychotherapy, Traditional Chinese medicine, homeopathic medicine, chiropractic, electromagnetic applications, and Native American medicine. (The rationale for selecting and designating these 18 practices as CAM and their definitions were not provided.) In the survey, physicians were asked to base their attitudes toward each of 18 different CAM modalities on one of three designated dimensions: "legitimate medical practices," "belongs outside medicine," and "cannot say." (Again, these dimensions were not further defined.) Nearly 90% of the physicians surveyed considered diet and exercise, behavioral medicine, counseling, psychotherapy, and hypnotherapy to be legitimate medical practices, and between 50% and 97% referred patients to these CAM providers.

The findings of Berman et al. may not be surprising since some physicians may regard specific therapies included in the survey to be allopathic treatment practices, such as diet and exercise. Based on this assumption, it is not surprising that homeopathy, Native American medicine, and Traditional Oriental medicine were regarded as legitimate medical practices by less than 27% of respondents and also received fewer

referrals. The majority of the physicians (between 67% and 91%) reported having received training in biofeedback, behavioral medicine, counseling or psychotherapy, and diet and exercise, a finding that may also support the assumption that these therapies are regarded as allopathic rather than CAM practices. Seventy percent of the physicians surveyed expressed an interest in receiving training in multiple areas of CAM, including therapies they did not regard as legitimate medical practices.

Another survey conducted in the US assessed physicians' attitudes, knowledge, and communication about CAM and their use of CAM (Boucher & Lenz, 1998). This survey was developed and administered by researchers at the NIH Center for Addiction and Alternative Medicine Research in Minneapolis, Minnesota, and was conducted at a teaching hospital in the Midwest. Questionnaires were mailed to 265 physicians affiliated with the hospital, and 109 (40%) were returned. The majority of physicians surveyed (65.1%) were identified as cautious but open-minded regarding the use and future of CAM. Almost half (47.7%) indicated that CAM offered moderate to extreme benefit to the public, and 59.6% believed CAM use would provide positive outcomes for patients. Over 85% recommended that physicians should have knowledge about the most commonly used forms of CAM and reported being most knowledgeable about biofeedback, chiropractic, acupuncture, and massage.

Similar to previous findings (Berman et al., 1995; Borkan et al., 1992), Boucher and Lenz's survey results reported that over half (52.3%) of the physicians had referred patients to a CAM provider, and a total of 69.4% had referred and/or recommended patients to practitioners of CAM. (Definitions of referral and recommendation were not

provided.) Patient interest, referral as a last resort, and acquaintance with a CAM practitioner were the most commonly cited reasons for CAM referrals. Although the majority cited prospective randomized controlled trials as the best evaluation of CAM efficacy, the association between this belief and their referral patterns were not evaluated. This survey also addressed physician/patient communication about CAM, reporting that the majority of physicians (71.1%) discussed CAM benefits and over half (55.9%) addressed possible harmful effects of CAM use with their patients. Discussion about CAM was initiated both by providers (30.3%) and by patients (32.1%).

The only national survey conducted to address the attitudes and behaviors of US allopathic providers toward CAM has been with primary care physicians (Blumberg et al., 1995). A total of 1000 surveys were mailed to family practice physicians and 1049 to internists. The number of usable returned questionnaires was 572 (30%). Similar to previous findings on knowledge and referral patterns (Berman et al., 1995; Borkan et al., 1992; Boucher & Lenz, 1998), the majority (58.7%) agreed that physicians should be knowledgeable about CAM. Over half (57%) of the physicians surveyed were willing to refer patients to the most commonly used forms of CAM (e.g., relaxation techniques, biofeedback, massage, meditation, hypnosis, and acupuncture).

In 1995, a meta-analysis of 12 existing surveys of physicians' beliefs about the usefulness and effectiveness of CAM was published (Ernst, Resch, & White, 1995). The conclusion reached was that physicians believed CAM to be moderately effective over all. However, these findings have been criticized because each survey included in the

meta-analysis used a different definition of CAM and some included therapies often regarded to be allopathic, such as diet and exercise.

Astin, Marie, Pelletier, Hansen, & Haskell (1998) conducted a meta-analysis of 19 existing CAM surveys of physicians abroad and in the US. However, the purpose of this study was not to address CAM in general; rather it focused on physicians' attitudes toward the five most commonly used CAM therapies cited from existing research (Astin, 1998; Eisenberg et al., 1993): acupuncture, chiropractic, herbal medicine, homeopathy, and massage. The decision to include specific therapies rather than CAM in general eliminated the confusion over multiple definitions of CAM noted previously between existing studies (Ernst et al., 1995).

Findings reported by Astin et al. indicated that across surveys, the mean referral rate for CAM was highest for acupuncture (43%), followed by chiropractic (40%), massage (21%), homeopathy (15%), and herbal medicine (4%). However, referral rates varied considerably between the studies. For example, the number of acupuncture referrals ranged from 8 to 71 across 15 of the 19 surveys. Allopathic physicians' mean rates of CAM practice were 19% for both chiropractic and massage, 17% for acupuncture, 16% for herbal medicine, and 9% for homeopathy. Again, the ranges between studies varied tremendously. For example, the range of physician's rates of CAM practice of herbal medicine was 0% to 78%. Lastly, the meta-analysis assessed physicians' beliefs in the efficacy of the five CAM modalities under study. Acupuncture received the highest rating of efficacy (51%), followed by chiropractic (53%), massage (48%), homeopathy (26%), and herbal medicine (13%).

Of particular interest from this meta-analysis is the variation in reported CAM referral rates across studies and more specifically, across the geographic regions in which the studies occurred. "Regional differences in familiarity and availability of CAM" were cited by Astin et al. as the most likely cause of variation between the rates of referral, practice, and efficacy for each type of CAM (Astin et al., p. 2308). Within similar geographic regions, physicians' responses tended to mirror the responses of consumers with regard to the most widely used or accepted forms of CAM. This suggests that consumers' use of CAM may in fact influence referral practices as well as the use of CAM by allopathic physicians, regardless of physicians' knowledge of CAM, since many physicians identified CAM as useful and used CAM for patient care. In addition, physicians' use of CAM may reflect the consumer-driven health care market; if physicians are not willing to provide consumers with what they want, consumers may seek other more willing providers.

An important limitation of these findings is that none of the studies included in the meta-analysis evaluated the reliability of the survey items. An additional limitation is that only one of the surveys indicated that non-respondents were demographically similar to respondents. Furthermore, only one of the studies obtained data to compare attitudes towards CAM among respondents and non-respondents. Verhoef and Sutherland (1995) ascertained non-respondents' attitudes toward CAM through telephone follow-up to encourage questionnaire completion. The questionnaires returned after the follow-up calls were used to identify the "nonrespondent" group. The attitudes of the non-responders were reported as similar to the responders.

Of the CAM studies addressing health-care providers, NPs were only included in one. Gordon, Sobel, and Tarazona (1998) surveyed adult primary care physicians (n = 624), obstetrics-gynecology (OB-GYN) physicians (n = 118), and NPs (n = 39) in addition to adult members of the Kaiser Permanente health maintenance organization (HMO) in Northern California. The purpose of the survey was to assess clinician and member use of any of 20 specific types of CAM and the extent of their interest in incorporating CAM into the HMO. The types of CAM included were divided into five specific categories (a) manipulation therapies (e.g., chiropractic, osteopathy, acupuncture, acupressure, massage therapy, body work); (b) ingested therapies (e.g., herbal or botanical medicine, homeopathic medicine, special diet, megadoses of vitamins); (c) mind-body therapies (e.g.., meditation, mindfulness; relaxation techniques; guided imagery, visualization; biofeedback; hypnosis, self-hypnosis); (d) movement therapies (e.g., Yoga; Tai chi, chi gong); and (e) supportive therapies (e.g., religious healing or prayer; 12-step program, support group; psychological counseling).

This study included a more rigorous process than previous studies to obtain a high response rate (57.5%). This process involved three attempts to obtain participation, including telephone interviews of a random sample of non-respondents. Similar to the findings of Verhoef and Sutherland (1995), no statistically significant differences were noted between respondents and non-respondents regarding demographic characteristics and interest in CAM. Gordon et al. reported that one-third of adult primary care physicians and nearly one-half of OB-GYN clinicians expressed an interest in using CAM. Within the OB-GYN group, NPs were significantly more likely than physicians to

be "very" interested in CAM use (78.9% versus 35.3%). Motivating factors for CAM use included a belief that not all problems can be effectively treated with allopathic medicines and that a more holistic approach to treatment of some problems may yield better results than using allopathy.

Use or recommendation of at least one of the 20 types of CAM to their patients was reported by 93% of the providers surveyed. OB-GYN clinicians were significantly more likely than adult primary care physicians to recommend megadoses of vitamins or supplements and herbal and homeopathic medicines for treating symptoms such as menopause and premenstrual syndrome (PMS). The factors most likely to influence the clinician's decision NOT to recommend CAM were identified as lack of familiarity with the methods, concern about effectiveness, and not wanting to recommend a treatment their patients would have to pay for themselves. Similar to findings from the meta-analysis of previous CAM studies (Astin et al., 1998), clinicians' use of and interest in CAM tended to mirror the responses of the HMO members with regard to the most widely used or desired forms of CAM. In addition, there was high interest among the providers surveyed to include CAM in the HMO (74.3% of OB-GYN clinicians and 65.6% of adult primary care physicians). However, despite the reported prevalence in use of and interest in CAM, lack of scientific efficacy of CAM was expressed as a concern regarding the inclusion of these therapies in the HMO services.

Limitations of Research on Allopathic Providers' Use of CAM

As noted in the meta-analysis by Astin et al. (1998), information regarding the psychometric properties of the tools used in the provider surveys conducted in the US and

abroad is very limited. A review of the literature revealed that survey tool reliability was reported for only one study: an established attitudes scale that was incorporated into the survey (Goldszmidt et al., 1995). A description of the efforts used to obtain face validity were reported for only three studies (Borkan et al., 1994; Boucher & Lenz, 1998; Goldszmidt et al.). A pretest was used in two studies (Borkan et al.; Verhoef & Sutherland, 1995), and a pilot study was conducted in only one (Verhoef & Sutherland). Field observations and interviews with CAM and allopathic providers and patients were used in one study (Borkan et al.); however, results of these preliminary studies were not reported. When the questionnaire format was identified, forced-choice response formats with Likert or dichotomous scaling for the majority of items were used with few open-ended questions included. The number of items per survey ranged from 16 to 22. Gordon et al. (1998) did not address questionnaire format in their study.

A major limitation with the existing surveys is the wide variation in the definitions and types of therapies that were included. In addition, some therapies were included that are not readily available in the US (e.g., psionic medicine), while other therapies are generally regarded to be within the realm of allopathy (e.g., diet and exercise). The list of possible CAM therapies included in the surveys ranged from 3 to 20 and included the following: acupressure, acupuncture, aromatherapy, art therapy, behavioral medicine, biofeedback, body work, counseling or psychotherapy, chiropractic, color therapy, special diet, electromagnetic applications, exercise, food allergy, guided imagery or visualization, herbal or botanical medicine, homeopathy, hypnosis, massage therapy, meditation or mindfulness, megavitamin therapy, movement therapies, Native

American medicine, osteopathy, prayer, psionic medicine, psychological counseling, relaxation techniques, religious or spiritual therapies, support groups or 12-step programs, tai chi or chi gong, touch therapies, Traditional Oriental medicine, and yoga (Berman et al., 1995; Borkan et al., 1994; Boucher & Lenz, 1998; Blumberg et al., 1995; Goldszmidt et al., 1995; Gordon et al., 1998; Verhoef & Sutherland, 1995; Reilly, 1983).

Any ability to generalize from the CAM surveys conducted on health-care providers is limited because the few studies conducted in the US have generally relied on regionally specific samples and have focused exclusively on physicians with one exception (Gordon et al., 1998). Furthermore, of the US provider surveys conducted, the number of providers surveyed has been small (range 109 to 781) (Boucher & Lenz, 1998; Gordon et al., respectively); generally low response rates have been reported (range 30% to 62%) (Blumberg et al., 1995; Gordon et al., respectively), and the focus has been on urban medical providers. Information about non-respondents' characteristics with respect to attitudes, knowledge, and/or beliefs about CAM have been reported for only two studies (Gordon et al.; Verhoef & Sutherland, 1995). Coupled with a low response rate, these study findings may be skewed toward respondents who were eager to participate because of either a strong positive or negative opinion about CAM. These limitations indicate a need to address CAM use among other primary-care provider (PCP) populations, to use a rigorous approach in tool development, and to use effective survey strategies to obtain acceptable response rates.

Significance of CAM to Nursing

Although CAM research indicates that health-care consumers are using CAM and allopathic providers are supporting these practices to some extent, as previously reviewed, only one of the published surveys on the general use of CAM by allopathic providers included nurses, specifically NPs. This is paradoxical as the philosophy underlying CAM is congruent with nursing values that are sensitive to culture and self-care and which embody the concepts of holistic care.

Holistic Education and Practice

The nursing profession is replete with examples that demonstrate the integration of a holistic education and practice philosophy. The creation of the American Holistic Nurses Association demonstrates the importance of holistic care to professional nurses at all levels of practice. Delores Krieger, RN, PhD, a recognized leader in the practice of holistic nursing, was the first nurse to study the effects of therapeutic touch. In addition, schools of nursing have incorporated CAM curriculum into their academic programs. The Center for Human Caring at the University of Colorado's School of Nursing is an example of nursing education, practice, and research conducted within a holistic philosophy of caring. The University of Virginia Health Sciences Center designated the school of nursing as the administrative location for its Center for the Study of Complementary and Alternative Medicine. The school of nursing was selected because of the nursing profession's "long standing history of bringing a holistic perspective to patient care and incorporating many complementary therapies...into patient care" (Center for the Study of Complementary and Alternative Therapies, 1998, p. 1).

Past President of the American Nurses Association, Noreen Frisch, has also acknowledged the fit between CAM and nursing practice: "Alternative therapies [CAM] complement nursing practice, and fall within the scope of our responsibilities." Frisch noted that professional nurses with skills in these areas could "help to manage patients' care and keep costs down for health care plans." (cited in Toran, 1996, p. 63). CAM strategies have also been identified as a means of "connecting the philosophical, theological, and cultural underpinnings of healing methods with the client's choice" in order to strengthen nurse-client partnerships and to respond to the current changes in the health-care system and changes in cultural diversity (Pepa & Russell, 2000, p. 127). In addition, the American Association of Colleges of Nursing (AACN) recommends that Master's-level nursing education prepare the nursing clinician to develop a comprehensive and holistic approach to care in order to address the health promotion and disease prevention needs of populations and to provide culturally sensitive care (AACN, Public Affairs, 1998).

Significance of CAM to Nurse Practitioners

NPs have a unique opportunity to provide primary care within a holistic practice philosophy. Within the nursing profession, primary care is regarded as a holistic approach to caring for the person, family, and community. This approach is fostered through an ongoing and mutually respectful relationship between the client and the nurse (Marion, 1996).

NPs comprise a large segment of primary care providers (PCPs). Currently, 95% of NPs practice in primary health care settings, and their numbers are projected to rapidly

increase--from approximately 30,000 in 1990 to 151,000 in 2015 (Cooper, Laud, & Dietrich, 1998). NPs may be Master's educated, depending on licensing requirements between states, which vary, and are educated to provide primary care to a variety of populations including the poor and underserved. These populations typically include a high number of culturally diverse groups.

NPs' Scope of Practice

As PCPs, NPs practice a wide range of nursing functions in addition to those functions traditionally performed by physicians. These latter include assessing, diagnosing, and treating illnesses; ordering diagnostic tests; conducting physical examinations; developing treatment plans; prescribing medications; overseeing and advising on case management; providing counseling and education; and collaborating with other health-care providers through consultation and patient referral. Increased patient satisfaction, decreased health-care costs, decreased repeat episodes of illness and disability; optimized patient and family health; and prevention of illness associated with the care provided by NPs have been cited in many studies (Brown & Grimes, 1993; Pearson, 1999; Rudy et al., 1998; Safriet, 1992).

Research supports the high quality of care provided by primary care NPs at levels comparable to or better than primary care physicians with regard to economy, effectiveness, and efficiency of care provided (Diers & Molde, 1979; Mundinger et al., 2000; Office of Technology Assessment, 1986; Perrin & Goodman, 1978; Ramsay, McKenzie, & Fish, 1982; Rudy et al., 1998; Sackett, 1974; Shamansky, 1985). As a result of these findings, governmental recognition of NPs as independent practitioners has

expanded from Medicare reimbursement for NP services in rural practice sites to include all regions within those states where NPs are allowed to practice independently of physicians (Butler, 2000).

NP Specialization

Similar to allopathically-educated physicians, NPs provide care within a variety of specialty areas, including acute care, adult health, college health, family health, geriatrics, neonatal health care, nurse-midwifery, pediatric health, psychiatric/mental health, and women's health. However, NPs differ from other PCPs because of their specific focus on empowering patients and families, coordinating community resources, promoting wellness and self-care, providing comprehensive health education and teaching health promotion, coordinating care for optimizing utilization, and acting as patient advocates for health care (Pearson, 1999). A major tenet of NP practice is the belief that physical problems cannot be addressed separately from complex social and psychological issues, and caring must be integrated with curing (Fisher, 1994). Therefore, NPs provide primary health care within a holistic framework, acknowledging cultural, psychosocial, and spiritual aspects of the patient's life.

Perhaps because CAM and nursing share holistic philosophies and recognize the individuality of each patient within care-giving practices that nursing, as a profession, has not felt the same need that physicians have felt to create a distinction between allopathic and CAM practices. In addition, because of the role nurses play as patient advocates, nurses may be more accepting than physicians of cultural health practices often regarded as CAM. Because NPs are specialized within the nursing profession to provide a level of

care beyond that of nurses in general, they may be more likely to incorporate CAM modalities into their repertoire of holistic-based primary care practices. Furthermore, since NPs function as interdisciplinary providers, they may be more likely than physicians to refer patients to CAM providers.

Pilot Study of NP Use of CAM

Evidence for the acceptance and incorporation of CAM both formally and informally in NP practice was recognized in a pilot study conducted by this researcher. The study involved semi-structured interviews with 11 health-care providers (allopathic and/or CAM) as an initial phase of tool development for this study. Seven of the respondents were licensed NPs (i.e., certified nurse-midwives, women's health care NPs, or family NPs). All seven of the NPs interviewed acknowledged they used CAM for themselves and their families as well as professionally in their practices. Professionally, these NPs provided, recommended, and referred to CAM providers. In addition, the NPs reported an increased interest in the use of CAM for personal well-being, to enhance health-care treatment options, and as a means of increasing awareness among NPs about patients' use of CAM. Although two of the NPs had received formal CAM training and were licensed/certified to practice a specific type of CAM, all of the NPs interviewed reported using a variety of CAM practices with informal preparation.

NPs and CAM Licensure/Certification

A supervisor at the Oregon State Board of Nursing (OSBN) also noted that some NPs are receiving formal preparation as CAM providers and are integrating CAM into their allopathically-oriented practices (T. Klein, WHNCP, personal communication,

May 5, 1999). For example, some NPs have reported certification in homeopathy and cranial sacral therapy as well as licensure in naturopathy. In addition, continuing education hours reported by NPs to the OSBN suggest an increasing number of hours being devoted to CAM topics, such as the use of herbal remedies for health care.

Allopathic Providers' Concerns About CAM Use

Although CAM is well suited to nursing practice because of its fit with holistic practice philosophies, many commonly practiced CAM modalities lack research based on traditional scientific measures of efficacy. This lack of support from the scientific community creates a dilemma for providers who want to offer health-care options that are respectful of their patients' beliefs and practices, yet they feel compelled to provide only scientifically-proven health-care practices.

There is no question that consumers are using CAM–with or without the knowledge of their allopathic health-care providers. However, use of CAM by consumers or providers without basic knowledge of its usefulness or efficacy has resulted in a barrage of concerns by the allopathic community, as noted in Chapter 1. Knowledge of the prevalence of consumer use coupled with concerns about potential harm to patients underscores the need for NPs to approach the use of CAM with the same growing interest as other PCPs are doing, specifically with regard to the scope-of-practice issues related to diagnosing and treating patients.

Concerns Specific to NPs' Use of CAM

As PCPs, NPs must be knowledgeable about the treatment modalities used by their patients, whether these modalities are allopathic or CAM, in order to provide health

benefits and to promote safety. If patients are engaging in harmful health-care practices, NPs must be cognizant of these potential harms and educate their patients. Likewise, NPs must be knowledgeable about a variety of health-care practices to offer treatment options that are cost-effective and efficacious, produce few or tolerable side-effects, and are appropriate for and respectful of the patient's cultural beliefs and practices.

Because of concerns the safety of CAM use, NPs must consider the risks of using CAM just as they consider the risks of using allopathic health-care modalities. As PCPs, NPs need to be particularly cognizant of liability issues regarding the use of CAM, including informed consent requirements for specific CAM therapies used; specific policies and philosophies of employers or contractors that may restrict or place limits on the use of CAM or referral to CAM providers; and the NP scope of practice as dictated by the Advanced Nurse Practice Acts of the state in which NPs' are licensed and practice.

AMA Response to Physician Use of CAM

Since the Flexner Report of 1910, the medical community has addressed concerns related to the practice of CAM within the physician's scope of practice. The AMA has addressed these concerns by establishing guidelines for practice to determine acceptable health-care standards and to discredit practitioners who deviate from the established directives (Cassidy, 1996). These directives are often reinforced within State Practice Acts regulated by each state's board of medicine, occurring as CAM practice restrictions or limitations. For example, the Oregon Revised Statutes (ORS) for physicians' scope of practice include a subsection specific to "alternative medical treatment" within the definition of unprofessional conduct (Miller, 1999, p. 5). Through this statute, the state

medical board endorses the use of CAM if deemed appropriate by physicians based on professional experience and support of a board-licensed colleague; the CAM must also pose no greater risk than conventional treatment options.

OSBN Response to NP Use of CAM

NPs have not used the approach practiced by the medical community to regulate the use of CAM in practice. For example, currently no Oregon State Board of Nursing (OSBN) guidelines or regulations address the use of CAM by NPs. The scope of nursing practice, as written in Oregon, includes only one statement related to CAM. Position statement #14 explicitly states that the board of nursing only recognizes the NP category of certified nurse-midwife and does not include "direct entry midwives" (OAR 851-50-005), who may be considered by some as CAM providers. However, the OSBN has begun to recognize the need to address the use of CAM within the NP scope of practice. This is evident in their development of a CAM task force comprised of Oregon NPs who are currently incorporating CAM into their practices with or without additional CAM provider certification/licensure. The intent of the OSBN is not to regulate CAM practice but to provide guidelines for NPs' use of CAM in their practices (T. Klein, WHCNP, personal communication, March 8, 2000).

Summary of Allopathic Providers' Use of CAM

The growing prevalence of CAM use among American health-care consumers and an increasing interest in CAM use among allopathic providers are supported in the literature. However, published research on the general use of CAM by allopathic providers in practice is limited almost exclusively to physician providers and has not

focused on women's health in particular. Furthermore, existing research is limited by the wide variation in the definitions and types of CAM modalities included, generally small sample sizes, a focus on urban practice settings, and typically poor response rates. Equally important the findings of these studies are not generalizeable to NPs.

The Use of CAM for Women's Health

Prior to reviewing the literature on the use of CAM for women's health, it is important to understand the history of women's health in the US. An overview of significant events in this history will provide insight into women's health research, the impact of women on the health-care industry, and current women's health issues. Initially, a description and definition of women's health will be provided to clarify its intended use in this research study.

Definition of Women's Health

Historically, women's health has been defined within a limited perspective, primarily focusing on reproductive issues. Recent definitions of women's health have expanded to include "...women's emotional, social, cultural, spiritual and physical well-being, [as] determined by the social, political, cultural and economic context of women's lives, as well as by biology" (Women's Health Office Newsletter, 1991, p. 1). This comprehensive definition of women's health is based on a broader understanding of health acquired through women's life experiences. These experiences are framed by individual beliefs about and experiences of health as defined by women themselves. The need to expand the focus on women's health to include issues that impact women throughout the course of their lives rather than at a single stage in life, such as the

reproductive years, was emphasized at the Jacobs Institute for Women's Health Conference in 1996 (Women's Health Office Newsletter).

Current definitions of women's health encompass all aspects of a woman's being, experienced throughout her lifetime. However, for purposes of this research, women's health issues will focus on ordinary life experiences encountered by women during their adult years, defined as 18 years of age and older. These experiences encompass health issues related to women's reproductive systems, such as menstruation, pregnancy, and childbirth, and menopause as well as health conditions associated with aging.

Significant Events in Women's Health

Over the past two decades, a series of events have occurred in the US that have had an impact on women's health. A precursor to these events was an increased awareness of the under-representation of women in clinical trials and the lack of funding for health-care issues specific to women (Adesso, Reddy, & Fleming, 1994; McElmurry & Parker, 1996). Women's health-care advocates began to recognize that the generalization to women of research data generated from studies with men, through prescriptive and/or treatment practices, could be placing women's lives at risk.

The Public Health Service Task Force. A pivotal event in women's health policy occurred in 1985 when a Public Health Service Task Force on women's health cited the lack of scientific data in this area as barriers to understanding women's health-care needs (Public Health Services, 1985). The findings of this report prompted the NIH to issue a new policy in 1986 to recommend that women be included in scientific clinical trials. However, the NIH recommendations were not mandates and, therefore, not enforceable.

Women continued to be excluded or underrepresented in health-related research studies until the next decade.

Key research studies excluding women. Auerbach and Figert (1995) cited three important studies that excluded women despite the generalization of these findings to women for health-care treatment and intervention. First, a significant reduction in the risk of cardiovascular disease due to the effects of aspirin was reported as a result of the Physicians Health Study of 1988. The study sample was comprised of 22,071 men; no women were included. Second, coronary artery disease was studied in the NIH-sponsored Multiple Risk Factor Intervention Trials ("Mr. FIT") with 15,000 men and no women. And the Baltimore Longitudinal Study on Aging generated findings on "normal human aging" from a sample that consisted of only men despite the fact that women comprise the largest percentage of the aging population.

Government response to research excluding women. In 1990, the ongoing exclusion of women in medical research studies supported by the NIH and the lack of gender differentiation in the analysis of research studies despite NIH policies that encouraged the inclusion of women were cited in a federal report (Nadel, 1990). The need for more research into the causes, treatment, and prevention of disease in women prompted the Women's Health Equity Act of 1990 (Auerbach & Figert, 1995). As a result, the Office of Research on Women's Health (ORWH) was created at the NIH that same year. The designated purpose of ORWH was to respond to the identified need for the inclusion of women in clinical trials (e.g., cardiovascular disease) and research

devoted to health-care issues prevalent among women (e.g., breast cancer) (Gallant, Coons, & Morokoff, 1994; Kirschstein, 1991).

In 1993, the ORWH identified 14 specific categories of interest for special research consideration (Pinn, 1994), many of which are currently being studied with regard to the use of CAM. For example, in 1993 a 14-year, $625-million project was initiated as the NIH's Women's Health Initiative (WHI), the largest disease-prevention study ever carried out in the US (Auerbach & Figert, 1995). This randomized controlled trial is being conducted to investigate the effects of diet modification, hormone replacement therapy, and dietary supplementation on the prevention of cardiovascular diseases, breast and colorectal cancers, and osteoporosis among 63,000 women (Pinn, 1994).

Concurrently, the OAM was established at the NIH, eventually becoming the National Center for Complementary and Alternative Medicine (NCCAM) (Department of Health and Human Services, 1998), as previously discussed. In 1997, the Center for Complementary and Alternative Research in Women's Health at Columbia University in New York was created to exclusively research CAM for women's health. Investigators at the Center have been reviewing CAM intervention literature on pregnancy (nausea, vomiting, and preparing the uterus for delivery), pre-labor and labor management, vaginal infections/symptoms (vaginitis), menstrual-related disorders (PMS, dysmenorrhea, menorrhagia), fibroids, menopausal problems (hot flashes), and breast cancer (National Institutes of Health, 1998, On-line). Currently, clinical studies are being conducted on Chinese herbal preparations for menopausal hot flashes and a red clover

product for the treatment of uterine fibroids. Prospective outcomes research on Traditional Chinese medicine in the treatment of uterine fibroids and Ayurvedic treatment for irritable bowel syndrome is also underway. Research being conducted among ethnically diverse populations includes field observations of the use of herbal remedies for women's health by Chinese and Latino healers and survey research on the use of CAM by African-American, Asian, Caucasian, Hispanic, and Latina women. Pending funding, a national multiethnic survey of women in the general population has been designed to assess the types of CAM women are using and their perceived efficacy of use (The Rosenthal Center for Complementary and Alternative Medicine, 2000, On-line).

Efforts by the federal government to increase research on women's health and to address CAM modalities as treatment options for women's health coupled with the public's growing interest in CAM have influenced the health-care industry, which has been forced to recognize the pivotal role women play as decision-makers in their own health care and that of their families.

CAM and Women's Health

Because women are known to engage in self-care practices that integrate CAM and allopathic modalities, this population has become a target for CAM-related marketing and information. Information on CAM for women's health is common in advertising, health newsletters, newspapers, women's magazines, retail books, news programs, and on the Internet. Women are bombarded with CAM choices ranging from no-cost therapies to significant expenditures for self-care techniques, over-the-counter remedies labeled

"natural," and health practices requiring the services of CAM providers. The following review includes popular and academic/scholarly forms of literature. A discussion of concerns about the use of CAM by women and the significance of CAM and women's health to nursing follows.

Popular Literature

Womens's magazines. Women's health has received increased attention within the popular literature over the past decade and is especially prevalent in articles, news "bites," and advertising found in magazines that target women. A brief review of seven popular women's magazines (Cosmopolitan, Family Circle, Glamour, Good Housekeeping, McCalls, Redbook, Woman's Day) from June 2000 provides evidence of the extensive coverage given to a wide variety of CAM practices and products relevant to women's health. An average of ten CAM advertisements, news bites, or feature articles appeared in each of the seven magazines (range 3 to 15). Common topics included herbal remedies and vitamin supplements for the management of fatigue, stress-related symptoms, and menopause; herbal or botanical remedies to combat aging; over-the-counter remedies and lifestyle diets for weight loss; natural products and movement therapies for breast enhancement; relaxation and movement techniques for stress management and fibromyalsia; homeopathic remedies for eye stress; and natural remedies for skin health.

Publications for general audiences. Even Newsweek (Spring/Summer 1999) devoted a "Special Edition" to women's health with extensive coverage on CAM. Information was provided on the use of a variety of CAM modalities for women's health,

including aromatherapy, massage, magnets, herbal medicine, acupuncture, meditation, oxygen therapy, nutritional supplements, light therapy, and homeopathy. The author of one of the articles addressed the extent of herbal remedies available for women's health, noting that "there's an herb touted as a cure for virtually every ailment known to women" (Williams, 1999, p. 90). In addition, Newsweek included a readers' poll of women regarding their health and health practices in which 43% of respondents said they had tried herbal remedies and an additional 34% had considered them for personal health use.

Lay texts. A perusal of the available books listed under women's health and/or CAM in three major bookstores in Portland, Oregon (B. Dalton, Barnes and Noble, and Powell's) revealed entire sections devoted to CAM for women's health. The range of resources covered recommended CAM modalities for women's health in general as well as specific types of CAM for specific women's health conditions. For example, in one resource, ginseng and dong quai were promoted for relief of menstrual cramps, irregular flow, and fatigue during menses, depression, and hot flashes (Wolfe, 1990). Another book for women's health included information on acupuncture, Chinese herbs, and homeopathy for the management of menopausal symptoms (Fogel & Woods, 1995). A book on herbal remedies included recommendations for the use of raspberry leaves to ease morning sickness and labor pains, and to prevent miscarriage (Tyler, 1993), and Yeastgard was suggested to alleviate vaginal burning and itching in a best-selling book authored by a woman allopathic physician (Northrup, 1998). Other common remedies being recommended by physicians and CAM providers in a lay text included aromatherapy, Ayurvedic medicine, herbal medicine, vitamin supplements, and liver

detoxification for the relief of premenstrual symptoms (PMS), such as abdominal pain, breast tenderness, headaches, irritability, and lethergy (Goldberg, 1998).

Books specific to the use of herbal remedies for women's health have been heavily marketed to women as a "natural" approach to dealing with ordinary life events, such as puberty, menopause, premenstrual tension, dysmenorrhea, heavy and/or irregular menstruation, and amenorrhea (Somerville, 1997). These books included self-care information on various herbal remedies used for specific women's health problems. Information was also provided on how to cultivate, identify, store, prepare, and use many commonly used herbs and discussed contraindications of the use of herbal remedies (Curtis & Fraser, 1991; Goldberg, 1998; Tyler, 1993).

Internet resources. Internet websites devoted to CAM for women's health are prolific. Many of these sites provide a variety of resources including information on CAM modalities for specific women's health-care conditions, summaries and citations of published research related to CAM for women's health, and chat rooms where women can ask the "experts" (i.e., medical specialists or CAM-licensed providers) questions about a variety of health-care topics. A review of a handful of these websites reveal an abundance of information on CAM modalities for aging, bladder infections, breast health, depression, diet, menopause, menstrual distress, osteoporosis, pregnancy, and premenstrual syndrome. Examples of these websites include Sapient Health Network (http://www.shn.net/corp.html); WebMD (http://www.webphysician. com/); Menopause Online (http://www.menopause-online.com); and Ask Dr. Weil http://cgi.pathfinder.com/drweil).

Dr. Weil's website provides question-and-answer opportunities on a host of topics about CAM for women's health, including herbal remedies for hot flashes and other menopausal symptoms, calcium for osteoporosis, and nutritional supplements for menopause. Another example of an Internet service is WholeHealth, a free biweekly on-line publication that provides up-to-date information on CAM research findings, many of which focus on women's health. Recently, study findings reported on WholeHealth addressed Vitamin K for osteoporosis and the use of the Chitosan supplement for weight loss. OnHealth is also a comprehensive website that provides information on women's health conditions from "A-Z" (http://onhealth.com). This site has experts available for questions and includes live shows on health topics, news and reports of current health-care options, a health directory of providers localized to the reader's area, the services of a "wellness manager," and an on-line drugstore for personal shopping. The plethora of information that is available to women through these websites suggests that women who rely on self-care practices need not leave their homes to manage their own health care. Unfortunately, CAM information passed on to women through many of these websites and other forms of popular media are often based on anecdotal reports and not sound science.

Academic/Scholarly Literature on CAM and Women's Health

Aside from the attention devoted to women's health in popular magazines, books, and cyberspace, editors of academic/scholarly health professional journals are devoting entire issues to women's health (e.g., Health Psychology, 1991, Vol. 10(2) and Journal of the American Medical Association, 1992, Vol. 268[B]). In addition, peer-reviewed

research journals devoted exclusively to women have been created, such as the Journal of Women's Health, Women's Health Care International, Women's Health Issues, Women's Health: Research on Gender, Behavior, and Policy, and a journal that focuses on CAM and women's health, Alternative Therapies for Women's Health.

A review of literature on CAM research reveals an abundance of studies on specific CAM modalities for specific women's health conditions. For example, a single issue of the Journal of Nurse-Midwifery (Vol. 44, Number 3, May/June 1999) covered the following topics on CAM for women's health care: herbal preparations for labor stimulation, acupuncture and acupressure for reproductive health care, the use of herbs during pregnancy and lactation, natural remedies for management of menopausal symptoms, homeopathic remedies for prenatal care, and therapeutic touch in labor and childbirth.

A study of 120 certified nurse-midwives (CNMs) in North Carolina was conducted to examine the prevalence and types of CAM used or recommended for their patients during pregnancy and post-partum (Allaire, Moos, & Wells, 2000). The majority (77%) reported using, recommending, or referring patients for CAM over the previous year. The most frequent types of CAM recommended, in order of prevalence, were herbal therapies, massage therapy, chiropractic, acupressure, mind-body interventions, aromatherapy, homeopathy, spiritual healing, acupuncture, and bioelectric or magnetic applications. Respondents used herbal remedies most often for nausea, vomiting, and hyperemesis; post dates and cervical ripening; lactation disorders; labor induction; anemia and iron supplementation; and labor augmentation or treatment of dysfunctional

labor. Furthermore, the midwives reported using herbs concurrently with allopathic medicine over 70% of the time. Reasons cited for CAM use, in order of prevalence, were: patient preference, common practice before using allopathic medicine, personal preference, belief CAM is safer than traditional allopathic medicine, belief CAM is less expensive than allopathic medicine, used as an alternative when allopathic medicine fails, offered as a more effective treatment than allopathic medicine, and more available. In addition, 41% reported having formal training in herbal therapies, massage, acupressure, homeopathy, and/or therapeutic touch. One-third indicated some training in CAM was obtained during CNM training.

Undoubtedly, the growing national interest in CAM use among consumers has prompted research with allopathic providers in the US on the use of CAM for themselves and their patients (Astin et al., 1998; Berman et al., 1995; Borkan et al., 1992; Boucher & Lenz, 1998; Gordon et al., 1998). Although the NIH Center for Complementary and Alternative Research in Women's Health is currently conducting research on women's use of CAM, a comprehensive review of MEDLINE and CINAHL databases for published scholarly research on women's general use of CAM in the US yielded only one qualitative study of 39 African-American and Hispanic women, conducted as a preliminary step in tool development for a broader multi-ethnic study (Cushman, Wade, Factor-Litvak, Kronenberg, & Firester, 1999). The published research with consumers and/or allopathic providers has been focused on the general patient population, typically adult men and women. There is a significant gap in the research literature on the use of CAM by women. This gap is surprising since national consumer surveys on the use of

CAM have found that if gender is associated with CAM use, women consistently are more likely to use it than men (Dunn, 1997; Eisenberg et al., 1998; Furnham & Forey, 1994; Kelner & Wellman, 1997; Harris, 1987; Thomas et al., 1991). Landmark HealthCare (1998), a managed-care organization, acknowledged that because women are chiefly responsible for the health care of their children, this finding among their own members is significant to the development of Landmark HealthCare services.

Concerns Regarding Women's Use of CAM

Concerns about the prevalence of CAM use by women have been repeated in the literature. Potential harm to women uninformed about possible side effects, untoward interactions, or the lack of scientific efficacy of CAM practices are concerns identified by proponents and critics of CAM alike. For example, concerns related to the use of herbal remedies include inadequate knowledge of the purity of the herbal products, potential interactions with prescription medications or other herbal remedies, and lack of data available to allopathic providers about herbal dosing and efficacy. The potential for negative effects of CAM use related to fetal development is a concern specific to women.

Ethical issues regarding lack of knowledge about the practices and qualifications of CAM providers who are supported and/or recommended by allopathic providers who are entrusted with patient care also have been cited (Abdel-Rahman & Nahata, 1997; Brody et al., 1996: Gates, 1994). Because of the influence of women on family health behaviors, concerns regarding CAM use may have implications for the family as well.

Resources for health-care providers. These concerns, as well as the knowledge of the prevalence in CAM use by Americans, have resulted in an increasing number of

resources available to allopathic providers. Herbs of Choice: The Therapeutic Use of Phytomedicinals (Tyler, 1994), the Physician's Desk Reference (PDR) for Herbal Medicines (Fleming, 1998), the Nurse's Handbook of Alternative and Complementary Therapies (Andrews, Angone, Cray, Lewis, & Johnson, 1999), and the Professional's Handbook of Complementary and Alternative Medicines (Fetrow & Avila, 1999) are recently published scientifically-based references for allopathic healthcare providers. These resources provide information on: the active ingredients of the herbal compounds; the actions of the compounds; reported uses; recommended dosages and methods of dosing; adverse reactions, interactions, contraindications and precautions; and special considerations. They also include a list of research studies and an analysis of the available research available, if any, to support the use of specific herbal remedies. Unfortunately, these sources and the health-care "experts" do not always agree on the efficacy of specific herbal remedies for specific women's health problems, the proper dosage for the most beneficial response, or the best means of using the herb.

A personal experience with CAM. The author's personal experience with approaches to dealing with premenstrual syndrome (PMS) provided some insight into the confusing and conflicting information available to women for the treatment of health problems with CAM, specifically the use of herbal remedies. In the fall of 1999, the author consulted with a licensed naturopath about recurrent monthly symptoms, including irritability and mood swings, breast tenderness, and occasional abdominal cramping preceding each normal monthly period. The naturopath identified the symptoms as PMS. Evening primrose oil was recommended for symptom management, specifically one

capsule in the morning and one capsule in the evening on a daily basis with effects to be noted after three months of use. The dosage of evening primrose per capsule was not provided. When asked about the specific dosage to be taking, the naturopath recommended purchasing a specific brand of capsules because the brand was relatively inexpensive; no specific dosage was provided. The recommended brand was purchased, available only in a dosage of 500 milligrams per capsule. The product label recommended taking one capsule daily. Because FDA approval is not required for herbal supplements, information about risks, side effects, possible harmful interactions, or reasons for use were not printed on the product label.

The author conducted an informal review of lay and professional resources to follow up on the dosage of evening primrose oil recommended for PMS. The Nurse's Handbook of Alternative and Complementary Therapies (Andrews et al., 1999) did not provide any information on the supplement. The PDR for Herbal Medicines (Fleming, 1998) included a recommendation for 500 milligrams, three times a day. However, a notation was made that it was approved for use in Germany only for the treatment and relief of atopic eczema symptoms. There was no information regarding potential side effects associated with use.

Tyler (1994) cited research that supported and rejected the use of evening primrose oil for PMS. The minimum efficacious dose recommended was 500 milligrams, four times daily. In light of the high cost of four capsules per day (average of $0.25 per capsule), the controversy surrounding the efficacy of its use, and "lack of toxicity data regarding long-term use of the product," Tyler did not advocate its use (p. 138).

A third resource, the Integrative Medical Consult: Physician's Reference to Botanical Medicines, included a recommendation for three grams of evening primrose oil daily for the management of PMS (e.g., six capsules daily). Furthermore, this was the only source to identify specific side effects, signs of excess dosage, contraindications, and potential herb-drug interaction.

Finally, the Alternative Medicine Guide to Women's Health (Goldberg, 1998) and employees at a local nutrition/health food store were consulted. Both sources provided the same recommendation that evening primrose oil should be taken with a B-complex vitamin with magnesium and 600 milligrams of calcium daily for optimum absorption of the herb. However, neither of these sources included a recommended dosage for the supplemental magnesium, a mineral that was found to be readily available in numerous dosages though not available in a B-complex vitamin, according to one pharmacist who was consulted.

The conflicting information available to the author resulted in questions about the usefulness of evening primrose oil for PMS symptoms. Furthermore, without the addition of B-complex vitamins, magnesium, and calcium in a daily diet, the author wondered if the ingestion of evening primrose oil merely created "expensive urine." This experience highlights the variety of resources available to women for the management of health conditions experienced as normal events in a woman's life. More importantly, this experience illustrates the conflicting information women may obtain from CAM providers, allopathic research literature, and self-care resources with regard to CAM modalities for personal health-care needs.

Significance of CAM and Women's Health to Nursing

There is a need to continue to research CAM modalities for women's health. Research on symptom management for commonly experienced women's health issues using CAM modalities is important just as survey research on women's use of CAM would provide valuable information for researchers and health-care providers educating them about CAM options available to and being used by women to address their health-care needs.

Nurses will also need to recognize that the knowledge women have about CAM may be obtained through unreliable sources, such as the popular media and the Internet. The potential for CAM use by health-care providers and consumers without adequate knowledge has evoked a number of concerns about the use of CAM. Therefore, it is essential that nurses educate themselves about CAM modalities and address the use of these practices with their patients.

Issues of safety related to the woman patient's health and of liability for nurses practicing as primary care providers are two major reasons why CAM must be addressed openly rather than being ignored in patient-provider interactions through "don't ask, don't tell" approaches to communication. Another important reason for nurses to address the use of CAM with their patients is that nurses must also be culturally sensitive to their patients' health-care practices. This requires that nurses communicate with their patients to ascertain what health-care practices are being used and then to be non-judgmental about their patients' choices.

Bushy (1992) provides nurses with a useful list of questions to ask patients specifically about their self-care practices. These include communication with patients about the purpose of these practices, the use of cultural healers and their willingness to have the nurse communicate with the healer to establish a care plan, and the role of family or significant others in the health-care plan. In addition, Eisenberg (1997) outlines a step-by-step strategy for allopathic providers to use as a guide for provider/patient discussions about CAM, citing the importance of documenting these discussions with patients and emphasizing the need to discuss CAM for purposes of patient safety within shared decision-making regarding health-care practices. These are important strategies because of the lack of legal guidelines specific to allopathic health-care providers for CAM use with patients.

Summary of CAM for Women's Health

Unquestioningly, women are using CAM for a variety of health-care needs. Because women often engage in self-care practices for their own health care and are targeted by the media for self-care practices related to CAM, nurses must take the time to communicate with and educate women about their health-care choices. This requires that nurses, as advocates and caregivers, acknowledge the prevalence of CAM use by women and take the initiative to educate themselves about CAM modalities, including the benefits and potential risks specific to the use of CAM for women's health.

Conceptual Framework for CAM and Women's Health

The conceptualization of CAM and women's health for this study is based on four interrelated factors that have been identified throughout this chapter, including use of

CAM, attitudes/beliefs about CAM, knowledge of CAM, and communication about CAM. First, research indicates that women are more likely than men to use CAM—with or without the knowledge of their allopathic health-care provider (Dunn, 1997; Eisenberg et al., 1993; Furnham & Forey, 1994; Kelner & Wellman, 1997; Harris, 1987; Thomas et al., 1991). One of the main reasons for this may be attributed to chronic illness. Many chronic health problems that occur in later life are more prevalent among women and result in functional limitations; these debilitating problems include arthritis, rheumatism, heart conditions, and hypertension (Dimond, 1995). For example, because women tend to outlive men in the US by an average of seven years, women experience a disproportionate burden of coronary heart disease disability and related health-care costs (Kinsella, 1992).

Expense of Chronic Illness

The financial burden of chronic illness has significant implications for women. The chronic nature of these health problems experienced more frequently among women than men, such as arthritis, depression, and hypertension, typically require ongoing care. Therefore, women who experience these illnesses often struggle financially whether insured or uninsured. Women diagnosed with these conditions are burdened financially, in part because these illnesses often result in medical uninsurability due to their chronic nature. However, women diagnosed with these conditions who are insured often incur high out-of-pocket expenses for their ongoing health-care needs due to poor reimbursement through the existing health-care system (Dimond, 1995).

Because of the high financial costs of living with chronic illness, women may be likely to seek less expensive health services or practices for health maintenance and management of chronic, non-life-threatening problems. These services and practices may include approaches to care that fall outside of mainstream allopathic practice, such as CAM. In fact, the most commonly cited health reasons for the reported use of CAM include chronic conditions (Dunn, 1997; Eisenberg et al., 1998; Eisenberg et al., 1993; Maunz & Woods, 1988). Therefore, it is not surprising that women consistently are more likely than men to use CAM (Dunn, 1997; Eisenberg et al., 1998; Furnham & Forey, 1994; Harris, 1987; Kelner & Wellman, 1997; Thomas et al., 1991).

Versatility of CAM for Women's Health Issues

A second factor to support the conceptual fit between women's health and CAM is that women reportedly use CAM for a variety of health-care reasons (Beal, 1998; Burg, 1996). Although research has not been published on reasons women might be more likely than men to use CAM, women's approaches to health care and the nature of women's health conditions may provide some clues. Burg (1996) speculated that women may use CAM based on gender-specific illness patterns and general knowledge about CAM use from the research on health conditions specific to women. Burg identified chronic, nonspecific hard-to-treat illnesses such as osteoarthritis, rheumatoid arthritis, and lupus as prevalent health concerns experienced by women. These chronic conditions are poorly managed with allopathic treatment approaches; therefore, women may be likely to turn to CAM modalities to help control the symptoms. This assumption was supported in

consumer research by Eisenberg et al. (1993) where chiropractic and relaxation were commonly used for the management of arthritis.

Gynecological problems were also identified by Burg (1996) as possible reasons why women are likely to use CAM. Women who experience these problems may appreciate the more "natural" treatment approaches offered by CAM. In addition, depression, anxiety, and emotional disorders were cited by Burg (1996) as health problems prevalent in women and conducive to CAM modalities. Eisenberg et al. (1993) reported the use of relaxation techniques, imagery, and self-help groups as CAM approaches used most often by consumers for depression and anxiety.

In addition, Burg (1996) suggested that women who have had negative experiences with allopathic health-care providers might choose to seek CAM providers who are prone to be more interested in and responsive to their health-care needs. Women who seek CAM providers might also include lesbians and women who are victims of sexual abuse. A holistic approach to care validates the importance of these women's experiences and addresses emotional issues in addition to physical health care needs. As a result, lesbians and women with a history of sexual abuse might choose CAM providers as well as NPs, providers who are known for their holistic practice philosophies. It is also likely that the gender of CAM providers and NPs may be a factor.

Congruence of CAM and Self-Care Practices

A third factor to support the conceptualization of CAM with women's health is related to self-care. Self-care has been defined as encompassing "a wide range of universal skills, which include rituals, remedies, and folk medicine, to retain and restore

health" (Bushy, 1992, p. 11). An integral component of CAM practice is self-care. Historically, women have relied on self-care practices for their own health and for the health of their families. Self-care activities have been regarded as "one of the cornerstones of the women's health care perspective" (McElmurry & Huddleston, 1991, p. 16) and have included the use of both allopathic and CAM practices (Webster et. al., 1986).

The Fit of CAM with Feminist Approaches to Health Care

The fourth factor to support the conceptualization of CAM with women's health is noted in the fit between the holistic philosophy of CAM and feminist approaches to health care. Within a feminist perspective, allopathy has often been regarded as a masculine model of health care. The masculine influence is evident in the practices and terminology used within the allopathic model of care practiced in the US. For example, allopathic health care providers are identified as "authorities" and "experts"; the health-care industry is characterized as "competitive"; health-care practices are based on reductionist, "mechanistic" approaches to care; and war terms are often used to define allopathic treatment practices (e.g., chemotherapy is a bullet in the arsenal of treatment weapons to annihilate malignant cells and to combat disease).

Historically, allopathic medicine has been based on a paternalistic system of care in which women's health has not been a priority. This is a result of American health care education, practice, policy, and research being rooted in a man's perspective, a perspective based on an assumption of a man's body as the comparative norm. Therefore, rather than celebrating women's health experiences, such as menstruation and

menopause, as normal events in women's lives, these experiences have been addressed from two perspectives, neither of which view these experiences in a positive light. These perspectives are based on a patriarchal belief system that has dominated mainstream allopathic medical practice in American since the early 1900's.

The first perspective results in normal events experienced by women, such as menopause, being labeled as "female problems". Related symptoms are downplayed or attributed to women's psyches, regardless of how debilitating. For example, for years allopathic physicians have viewed menopausal symptoms as minor ailments or symptoms conjured up in the mind.

The other perspective of women's health takes normal events in women's lives that are clearly not psychological, such as childbirth, and "medicalizes" or assigns diagnostic categories to the events, thereby treating them as medical conditions. This process of "pathologizing" normal life events stems from 1950's research in which dysmenorrhea was documented as a symptom of the patient's being unhappy about being a woman (Northrup, 1998). As a result, women's health conditions have often been treated as psychological disorders rather than physical disorders. Feminists have criticized these allopathic-based methods of "medicalizing" women's health problems as a major institution of social control (Conrad & Kern, 1981; Conrad & Schneider, 1980; Freidson, 1970; Riessman, 1983; Ruzek, 1978; Zola, 1972; Zola, 1975), which thereby transform women's complaints into illnesses and symptoms that are generally managed without attention to social causes (Riessman).

Although not all women are feminists, women have a history of engaging in health-care practices as a part of their healing role (Achterberg, 1990). CAM has expanded the opportunities for women to manage their own health care, and it has been regarded as a feminist response to reject the paternalistic and authoritarian nature of allopathic medicine. Since the underlying philosophy of CAM practices are regarded as holistic and are also seen as non-paternalistic, CAM is a logical fit for women's health.

Specific Aims

This chapter has discussed several important reasons why there is a need to address the use of CAM by NPs for women's health. These include the gap in literature on NPs' use of CAM, the significance of CAM to nursing, the key role NPs play in women's health care, and the prevalence of CAM use by women. To address this need, a survey study was conducted with NPs to explore their use of CAM for women's health. The specific aims were to describe (a) CAM use by NPs for women's health; (b) NPs' attitudes/beliefs regarding the use of CAM for women's health; (c) NPs' knowledge of CAM and CAM providers; (d) NPs' training in specific types of CAM; (e) NPs' communication about CAM and the importance of knowing whether their women patients use it; and (f) the factors associated with use and nonuse of CAM by NPs for women's health. The methods used to carry out this research will be discussed in the Chapter 3.

CHAPTER III

METHODS

Described in this chapter are the design, methods, and analysis used for this study of nurse practitioners' use, attitudes/beliefs, knowledge and communication about complementary/alternative medicine (CAM) and its application to for women's health. Dillman (1978), Polit and Hungler (1995), and Czaja and Blair (1996) were used as guides for the sampling methods, survey development procedures, data collection methods, and data analysis procedures.

Research Questions

The research questions were framed within the four domains of use, attitudes/beliefs, knowledge, and communication concerning CAM, as identified from previous surveys. The main research question was "What is the use of CAM by nurse practitioners (NPs) for women's health?" Research questions posed to address this question were "What proportion of the NPs surveyed recommend, refer, and provide CAM?" "What types of CAM do NPs use for women's health?" "What are the most common types of women's health conditions that NPs use CAM for?" and "Why do NPs include CAM in treating? women's health?"

The second main research question was "What are NPs' attitudes and beliefs regarding the use of CAM for women's health?" Two sub-questions related to this domain were "What attitudes do NPs have regarding the use of CAM for women's health?" and "What beliefs do NPs have about the advantages and disadvantages of the use of CAM for women's health?"

The third main research question was "What is NPs knowledge of CAM?" A group of related sub-questions were "How important is it for NPs to be knowledgeable about CAM for women's health?" "What types of CAM are NPs interested in learning more about?" "What knowledge do NPs have about specific types of CAM?" and "How do NPs obtain knowledge about CAM and CAM providers for women's health?" The fourth main research question was also related to the domain of knowledge: "What training do NPs have in specific types of CAM?"

The fifth main research question was "What is NPs' communication about CAM?" Questions related to this overarching question were "How important is it for NPs to know whether their women patients use CAM?" "How do NPs communicate about CAM with their women patients?" and "What is the professional communication about CAM?"

Finally, a group of research questions were posed to address NPs' use of CAM in relation to demographic characteristics and the four domains. The main research question was "What are the factors associated with use and nonuse of CAM by NPs for women's health?" The four related sub-questions posed to address this question were: "What are the factors (personal, practice, and demographic) that influence NPs' use of CAM for women's health?" "What is the relationship between NPs' attitudes and beliefs about CAM and NPs' use of CAM for women's health?" "What is the relationship between NPs' knowledge of CAM and NPs' use of CAM for women's health?" and "What is the relationship between NPs' communication about CAM with their women patients and NPs' use of CAM for women's health?"

Research Design

A descriptive correlational survey design was used to answer the research questions. A questionnaire designed specifically for this study was mailed to those NPs licensed in Oregon who were most likely to provide health care to women.

Setting and Sample

The sample for this study included 582 of the 1446 NPs who were currently licensed to provide health care to women (ages 18 and older) in the state of Oregon in 2000. Oregon is considered a rural state. According to the most recent geographic census data (1990), 30% (839,050) of Oregon's total population (2,842,321) reside in non-urban areas (Center for Population Research and Census, 1999). Gender representation in the state is roughly equal, according to 1998 census data (1,615,215 males; 1,651,300 females) (Center for Population Research and Census).

Allopathic health care in Oregon is primarily available through a managed care system including the state's Medicaid plan. Health-care needs are also met by a variety of CAM providers, many of who were trained within the state and who maintain an active Oregon license to practice. These include 995 chiropractors (K. Bird, Oregon Board of Chiropractic Examiners, personal communication, May 5, 2000); 347 acupuncturists (J. Chaney, Oregon Board of Medical Examiners, personal communication, May 5, 2000); and 366 naturopaths (A. Swan, Board of Naturopathic Examiners, personal communication May 5, 2000).

Oregon was selected as the geographical region for this study because the state is unique in the number and type of accredited academic institutions for the education and

training of CAM providers. These include (a) the Ashland Massage Institute, (b) Cascade Institute of Massage and Body Therapies, (c) the East-West College of the Healing Arts, (d) the National College of Naturopathic Medicine, (e) the Oregon College of Oriental Medicine, and (f) Western States Chiropractic College. Four of the six CAM institutions are located in or near the city of Portland, the area of focus for the qualitative pilot study described in the section on questionnaire development. These schools have established relationships with managed care organizations (MCOs) to provide CAM. For example, Kaiser Permanente, the largest MCO in the state, reimburses for chiropractic, naturopathy, and acupuncture when its members are referred by Kaiser's allopathic providers (i.e., physicians, NPs, and physician assistants). The ability of NPs to independently refer to both CAM and allopathic providers is also unique to Oregon and demonstrates the level of practice autonomy afforded to NPs in the state.

Each state's Board of Nursing dictates the scope of practice for NPs. Since 1986, the state of Oregon has required all NPs to have completed preparation at the Master's level. NPs can function with an independent scope of practice, without a physician sponsor and with prescriptive privileges for schedule II, III, IIIA, IV, and V categories of drugs (T. Klein, OSBN, personal communication, February 7, 2000). The autonomy of NPs in Oregon is greater than in many other states and allows for independent referral to both CAM and allopathic providers.

Participants for this study were obtained from a database disk of currently licensed NPs available through the Oregon State Board of Nursing (N = 1446). NPs with addresses outside of Oregon and its neighboring Washington state counties were

excluded. The sample was drawn from NP specialty groups who would be likely to provide health care to women in Oregon. Only the specialty groups with the largest numbers of NPs meeting these criteria were included in the sample. These were (a) Family (FNPs = 480); (b) Adult Health (ANPs = 283); (c) Certified Nurse Midwives (CNMs = 179); and (d) Women's Health Care (WHCNPs =126). Of these four specialty groups, 100% of the CNMs and WHCNPs were included in the sample because of their practice focus on women's health. To achieve an economically affordable sample size, a random sample of the ANPs and FNPs was obtained since NPs in these specialties may not provide health care to women; because of the difference in total sample size between these two NP specialties, 30% of the eligible ANPs (85 of 283) and 40% of the eligible FNPs (192 of 480) were selected from a table of random numbers. Since ANPs may be more likely to practice in specialized settings that do not provide health care to women, a smaller percentage of ANPs than FNPs were included. The total sample size of WHCNPs, CNMs, ANPs, and FNPs was 582.

To determine whether the respondents represented the study population, the demographic data reported on returned surveys were compared with the overall aggregate demographic data obtained from the Oregon State Board of Nursing (OSBN) for all active NPs (N = 1639). As demonstrated in Table 1, the ethnic distribution for those who reported this information to the OSBN was predominately Caucasian (95.3%). Among those reporting gender, 93.8% were female. Because of the highly skewed gender and ethnicity of Oregon NPs, these data were not collected to avoid identification of

non-Caucasian and/or male participants and to increase their comfort level for survey completion.

Table 1

Ethnic Representation of Oregon NPs

Ethnicity	Total N = 1600	
	n	%
Caucasian	1525	95.3
Asian/Pacific Islander	33	2.0
Hispanic	22	1.4
Other	12	0.8
Black/African American	7	0.4
American Indian	1	0.1

Note. Data from 2/29/00, Oregon State Board of Nursing.

Demographic data collected in the survey and available through the OSBN included age, employment status, and employment setting. Nearly one-half were 40-49 years of age. The frequencies and percentage for each 10-year age category are shown in Table 2.

Employment status was reported to the OSBN by 1540 of the 1639 NPs who have retained an active license in the state of Oregon. The majority of NPs practicing in Oregon (49.4%) are employed full-time; 34.7% are employed part-time. Only a small percent of NPs (6.7%) are unemployed or volunteer their services. The remaining Oregon-licensed NPs (9.2%) are employed outside of Oregon. For purposes of this

study, only NPs who described themselves as currently practicing in Oregon on the demographic portion of the survey were included in the analysis.

Table 2

Age Representation of Oregon NPs

	Total N = 1639	
Age in Years	n	%
20-29	30	1.8
30-39	249	15.2
40-49	770	47.1
50-59	512	31.2
60-69	71	4.3
70-79	7	0.4

Note. Data from 2/29/00, Oregon State Board of Nursing.

The majority of NPs practice in an office practice with a physician (23.0%). The other most commonly reported employment settings included an ambulatory care clinic or physician's office (17.6%); a public or community health setting (14.1%); hospital acute inpatient care (12.0%); and an office practice without a MD (8.5%).

Development of the Survey Tool

Prior research on allopathic provider use of CAM has used mail, telephone, or personally distributed surveys. These survey tools have been inconsistent in their definitions of CAM and the categories of CAM addressed. Furthermore, lack of reported reliability or validity of the tools used and poor response rates have limited the findings of these studies. Because of these limitations and the fact that these studies have focused

almost exclusively on physicians, there was a need to develop a tool to specifically examine NPs' use of CAM.

Phase 1: Review of Literature and Existing Surveys

Survey tool development included several phases. Initially, a comprehensive review of the literature was conducted to evaluate previous research. This indicated that all of the published literature on allopathic providers' use of CAM for general patient care focused primarily on physician providers in the US and abroad with the exception of one study that included nurse-midwives (Gordon, Sobel, & Tarazona, 1998). Of the provider surveys conducted in the US, the number of providers surveyed has been small (range 109 to 781) (Boucher & Lenz, 1998; Blumberg et al. 1995); the studies have cited generally low response rates (range 30% to 61%) (Blumberg et al.; Berman et al., 1995); and the focus has been on urban practices.

Nine existing tools from the allopathic provider surveys were obtained and reviewed to identify potential items for inclusion in this study. Reported information regarding the psychometric properties of these nine tools is very limited. Only one tool had reported reliability, and that was on an established attitude scale incorporated into the survey (Goldszmidt, et al., 1995). Only three studies included a description of the efforts used to obtain face validity (Borkan, et al. 1994; Boucher & Lenz, 1998; Goldszmidt et al.); two indicated use of a pretest (Borkan et al.; Verhoef & Sutherland, 1995); and only one conducted a pilot study (Verhoef & Sutherland). Field observations and interviews with CAM and allopathic providers and patients were used in one study (Borkan et al.). However, results of these preliminary studies were not reported.

All of the existing tools have used forced-choice questions with Likert or dichotomous scaling for the majority of items; most also included a few open-ended questions. The number of items per tool ranged from 16 to 22. A major problem was the wide variation in the definitions and types of CAM therapies that were included, including some therapies that are not available in the US (e.g., psionic medicine) and some that are not commonly regarded as "alternative" (e.g., diet and exercise). The list of possible CAM therapies ranged from 3 to 18 and included the following: acupressure, acupuncture, aromatherapy, art therapy, behavioral medicine, biofeedback, counseling or psychotherapy, chiropractic, color therapy, diet and exercise, electromagnetic applications, food allergy, herbal medicine, homeopathy, hypnosis, massage therapy, megavitamin therapy, movement therapies, Native American medicine, osteopathy, prayer, psionic medicine, spiritual therapies, touch therapies, Traditional Oriental medicine, and vegetarianism (Berman et al., 1995; Blumberg et al., 1995; Borkan et al., 1994; Boucher & Lenz, 1998; Goldszmidt et al., 1995; Reilly, 1983; Schachter, et al., 1993; Verhoef & Sutherland, 1995). Despite the range of definitions and types of CAM therapies included, the actual items focused on one or more of four domains, specifically use of CAM, attitudes and beliefs about CAM, knowledge of CAM and CAM providers, and communication about CAM.

Items within the domain of use of CAM included questions about whether the provider prescribed, referred, personally provided to patients, or personally used CAM therapies for themselves or their families. An example was "Have you ever been treated by an alternative medical practitioner?" (Perkins et al., 1994). Items were also included

that were intended to ascertain the types of CAM being used from a provided list, such as "Do you use any of the following techniques in treating patients in your general practice?" (Goldszmidt et al., 1995). Frequency of CAM use and concomitant use of CAM with other forms of CAM and/or allopathic treatment were also assessed. Survey items were also included to examine whether an allopathic or non-allopathic-trained CAM provider was recommended, referred to, or used by? for patients. In addition, health reasons and decision-making factors for provider use of CAM were addressed.

Items within the domain of attitudes and beliefs included questions specific to provider interest in CAM, whether CAM should be available within their national health program or practice setting, perceived usefulness and efficacy of CAM, and beliefs regarding any scientific basis for the use of CAM. Specific items from previous CAM provider surveys included "What kind of validation or evidence do you consider important before you would accept an alternative technique as useful for your patients?" and "Do you consider that you have seen evidence of beneficial response in patients from alternative techniques?"

Items related to the domain of knowledge included questions about whether the providers had ever heard of the CAM therapies listed and knew the principles involved. Additional questions were asked about their knowledge of qualifications/credentialing of CAM providers and whether they knew the name or location of a provider for the different types of CAM listed. Knowledge in the form of education or training was examined by asking about the type of CAM training received, interest in receiving CAM training, and whether CAM should be taught as a formal course during medical school

training. Examples included "How much knowledge of these techniques do you have?" (Reilly, 1983) and "Have you received any training in any of the following techniques?" (Goldszmidt et al., 1995).

The final domain, communication about CAM, included items such as "Have any of your patients requested referral to the following?" "Have you ever suggested to your patients a referral to any of the following?" and, "Did you suggest alternative medical treatment at the initial consultation, or only after conventional forms of treatment had failed?" (Perkins et al., 1994) In addition, related questions were asked as to whether communication included a discussion of the benefits and harms of CAM use.

Prior to drafting the survey tool, it was important to initially determine whether the domains identified from previous CAM research conducted primarily with physicians were comprehensive and applicable for this study of NPs with a focus on women's health. Therefore, a pilot study was conducted to address these issues in the next phase of tool development.

Phase 2: Pilot Study

A pilot study of CAM and allopathic providers was completed during the winter of 1999 (January/February) in the second phase of tool development. The purpose of the pilot study was to determine the types of issues that should be included in a CAM survey of NPs specific to women's health. OHSU IRB approval was obtained to conduct semi-structured, audiotaped interviews with 11 purposefully selected providers (Appendix A). The sample included five exclusively allopathic providers and one exclusively CAM provider. The remaining five providers were cross-trained in allopathy (e.g., medicine or

nursing) and one or more CAM practices. As a group, these providers were licensed as registered nurses, certified nurse-midwives, family nurse practitioners, women's health nurse practitioners, allopathic physicians, allopathic medical doctors, doctors of oriental medicine, acupuncturists, hypnotherapists, massage therapists, and naturopaths. The variety of backgrounds represented by the participants provided a broad perspective on the subject of CAM.

The individual interviews lasted 25 to 45 minutes. Fifteen semi-structured questions were used to guide the interview (see Appendix B). The majority were based on the four specific domains (use of CAM by NPs, attitudes/beliefs about CAM, knowledge of and training in CAM, and communication with women patients and CAM providers about CAM) described in the previous section. Examples include "Do you consider the use of CAM an important issue for women's health? Why or why not?" "What would you include in a list of CAM for women's health?" "What would be important to include in an assessment of allopathic providers' attitudes/beliefs about CAM for women's health?" "Regarding CAM, how should communication and collaboration of NPs with patients be assessed?" and "What are the factors that could influence the use of CAM by NPs for women's health?"

Questions about the use of the acronym *CAM*, sensitivity of the subject matter, and recommendations for tool dissemination to enhance response rate were also asked. In addition, participants were asked to identify any other domains that might influence the use of CAM for women's health. No new dimensions were identified. All of the responses fit within the four domains identified in previous research. As a result,

potential items obtained from the qualitative interviews were used to either support pre-existing survey tool items or became new items in the initial process of survey development. For example, none of the existing provider surveys specifically addressed the use of CAM for women's health. Recommendations specific to NPs' use of CAM for women's health included the need to identify specific women's health problems for which specific CAM modalities are most often used, including referrals to CAM providers, recommendations for CAM, or use of CAM. Items specific to possible reasons why NPs use or recommend CAM for their patients were also suggested. These included patient requests, synergy between CAM and patient's cultural beliefs, patient lack of response to allopathic treatment, and the patient's type of illness or reason treatment is being sought.

The importance of addressing scope-of-practice issues as factors influencing CAM use was also identified. Although scope-of-practice issues related to physicians' liability have been addressed to some extent in the literature (Cohen, 1999; Weintraub, 1999), these issues have not been addressed in CAM surveys with physicians. Participants recommended asking providers if they feel restricted in their use of CAM by their scope of practice or their practice environment. Examples were provided about existing policies within managed-care settings that do not allow for referral to CAM providers who are not included in specific managed-care plans, thereby restricting patients' access to CAM providers. Recommended items specific to women's health and related to scope-of-practice issues added new dimensions to existing items in the domain of use.

Within the domain of attitudes/beliefs about CAM, respondents from the qualitative study identified a need to "tap into why NPs believe what they believe about CAM." Additional items to address within this domain included the importance of scientific efficacy versus anecdotal observations, belief in patient choice, and willingness to seek out information about CAM for themselves or their patients. Other suggestions included items that would address factors that might influence personal attitudes and beliefs about the usefulness and efficacy of CAM, such as anecdotal experiences from personal or family use, patient use or use of CAM within professional practice, personal or patients' beliefs or philosophies (e.g., Eastern philosophy and environmentalism), patients' cultural practices, and the importance of peer recommendations about CAM.

Participants also identified scope-of-practice issues as important factors that may influence NPs' attitudes and beliefs about the use of CAM. Participants from the pilot study suggested the following items to address scope-of-practice issues: specific restrictions or limitations on CAM referral and practice within the practice setting, fear of personal liability for promoting or supporting the use of CAM for patients, belief that CAM modalities are included within the NP's scope of practice, and fear of jeopardizing licensure if CAM is provided or promoted.

The qualitative study findings also added several items to the knowledge domain. These included NPs' knowledge of their patients' use of CAM and the methods used to obtain knowledge of CAM and CAM providers.

Numerous items related to communication were also recommended from the qualitative study. These included adding whether patients ever initiated discussions

about their use of CAM and if so, at which point (i.e., initial consultation, subsequent to allopathic treatment, or both) and how often. Items were also suggested pertaining to the types of CAM that patients most often ask about and/or use, and the types of CAM that NPs most often dissuades patients from using, if any. Items addressing specific information about patient referrals were also recommended, such as the type of CAM provider being referred to and for what purpose(s). Additional suggestions included items related to methods of communication/resource referrals were used by NPs to discuss CAM with patients (e.g., Internet resources, pamphlets, books, advertisements, journal articles, and product samples). Other items recommended for inclusion pertained to reasons why NPs might not communicate with their patients about CAM, including unfamiliarity with CAM methods or uses, a belief that CAM is not useful, unavailability of CAM, expense of CAM, lack of insurance coverage or reimbursement for CAM, lack of peer support, fear of treatment interactions, and no perceived need for CAM use. Respondents also suggested items to assess what NP/patient communication about CAM is based on, such as personal experience, practice experience, scientific efficacy, scope of practice or practice guidelines, and personal knowledge.

Phase 3: Draft 1 of the Survey Tool

The third phase of tool development resulted in the first draft of the questionnaire. The Total Design Method (TDM), developed by Dillman (1978), was followed to develop the survey format. The TDM is a two-part approach to survey research that "relies on a theoretically based view of why people do and do not respond to questionnaires and a well-confirmed belief that attention to administrative details is

essential to conducting successful surveys" (Dillman, 1978, p. viii). The first part of the TDM focuses on approaches that will enhance the quality and quantity of survey response. The second part of the TDM is the administrative plan, which includes implementation of the survey according to the intentions of the survey design.

Using the TDM approach to survey development, items from each of the four domains related to CAM (use, attitudes/beliefs, knowledge, and communication) obtained through existing surveys were combined with items drafted from the qualitative study responses. These items were written with a focus on use of CAM for women's health. Consistent with previous survey research on CAM, the initial questionnaire primarily used a forced-choice response format with Likert scales and dichotomous response questions. This initial draft was 10 pages long and included 39 items and 8 tables (see Appendix C).

Phase 4: The Expert Panel Review

The first draft was distributed to an expert panel in the fall of 1999. The expert panel was comprised of 13 NPs either currently employed as OHSU School of Nursing faculty at the four regional campuses (Portland and three rural campuses) or non-faculty NPs currently practicing in Oregon. In addition, four of the expert panel members located at one of the rural OHSU campuses met as a focus group, which was audiotaped. The diversity of expert panel members allowed for input from NPs throughout the state. The criteria for panel selection included strengths in health care and/or research related to CAM, families, and/or women's health. The expert panel was asked to complete the

survey, focusing on content validity and formatting. Suggestions on item clarity, response options provided, and language were encouraged.

The tool was revised based on the feedback of the expert panel. The overwhelming response was that it was too lengthy and required approximately 30 minutes to complete. In addition, the panel cited redundancy in the tables within the tool and recommended merging the types of CAM in the full-page matrix into general categories to decrease the number of options. In an effort to shorten the tool, only those items that were clearly stated and had face validity were retained. This was accomplished by incorporating expert panel comments and reassessing the fit between the research questions and the survey items. Redundant questions were reformatted and combined. The number of tables was reduced from 8 to 4 and CAM options in the matrix were combined from 12 types of CAM to 9. This decreased the length from 10 to 7 pages and the number of items from 39 to 30. Additional response options for some of the items were included as recommended (Appendix D). To reduce respondent burden, the goal was to achieve an average survey completion time of 20 minutes or less.

Phase 5: Final Revision of the Tool

The revised tool was evaluated by a statistician at OHSU, further revised, and administered to five experts to evaluate respondent completion time. The statistician's recommendations focused on items in relation to data analysis. Specifically, it was recommended that all Check-all-that-apply questions be changed to dichotomous response options (i.e., yes/no) to force the respondent to answer. These revisions were made, changing the number of items from 31 to 32. The revised survey was administered

to five of the eleven expert-panel members who had previously piloted the tool. The average completion time was under the goal of 20 minutes (M = 15 minutes; Range = 12 minutes to 17.5 minutes).

Final decisions regarding revisions focused on the demographic items. Respondent anonymity was considered when drafting these items (see items 19 through 31 in Appendix E). For example, gender and ethnicity were not included, as discussed above, because of the highly skewed demographics of the Oregon NP population, favoring Caucasians and women. It was important to exclude these items because geographic location and practice setting are important variables for the research study and coupled with gender and ethnicity, respondents might have felt uncomfortable responding to questions specific to their own use of CAM in practice. The final survey tool was printed into a booklet (see Appendix E).

Data Collection

The survey was disseminated in April and May 2000. Prior to conducting the survey, IRB approval was obtained (see Appendix F). Respondents' addresses were generated from a database disk of all NPs licensed in Oregon who met the criteria for the study (N = 1173). As previously described, the final sample of 582 included all WHCNPs (N = 126) and CNMs (N = 179), and a random selection of ANPs (N = 85) and FNPs (N = 192).

The survey was distributed with a cover letter outlining the instructions for completion, the importance of completing the survey in its entirety, and information on how participants could obtain results (see Appendix G). The cover letter instructed

participants to complete and separately return a postcard in order to obtain results. An IRB-approved information form was included to provide details of the potential risks and benefits of participation and assurance of confidentiality of participants' responses (see Appendix H). Participants were instructed to retain this form. Completion and return of the survey implied consent for participation. NPs who were not currently practicing in Oregon or who did not provide health care to women were instructed to return a blank questionnaire to assist with calculation of an accurate response rate. A self-addressed stamped envelope was included for return mailing. In addition, an herbal tea bag was provided as an incentive to relax with a cup of tea while completing the survey.

Efforts were made to increase the response rate by using a follow-up mailing procedure, as recommended by Dillman (1978). The number of follow-up mailings was based on the overall response rate with a desired response rate of 50%. The initial mailing was sent on April 24, 2000. One week after the first mailing (May 1), a postcard reminder was sent to the entire sample. The postcard served a dual purpose, thanking those who had returned their completed surveys and reminding those who had not yet participated. Following the initial mailing, a response rate of 44% ($\underline{N}$ = 256) was achieved. Because this rate was under the minimum goal of 50%, a revised letter (see Appendix I) and the survey were sent to non-respondents three weeks after the initial mailing on May 15. A final response rate of 60.7% ($\underline{N}$ = 292) exceeded the stated research goal; therefore, no further mailings were sent and the data were analyzed with the responses obtained from the two mailings.

Data Management and Analysis

Names from the database list of eligible participants were examined to avoid duplication. This was accomplished by deleting one of each dual address on the list. Following this process, each remaining name on the list was given an identification (ID) number assigned sequentially from 001 to 582 and maintained in a master list. Computerized labels of these ID numbers were generated with an ID number included on each participant's address label and a corresponding ID label affixed to the back page of each participant's survey. This procedure allowed the researcher to record returned surveys whether completed, undeliverable, or not applicable based on the participants' current practice. In addition, non-respondents were identified through their ID numbers to facilitate follow-up. The master list of names and ID numbers was separated from all data and maintained in a locked file accessible only to the researcher.

The research questions were used to guide the data analysis process. Quantitative data were entered and analyzed using SPSS. The cut-off date for survey return was June 7, 2000. Returned surveys were sorted by ID number and entered based on completion status (i.e., completed or returned uncompleted). Data were cleaned by examining output for missing data and incorrectly entered data, identified by unassigned numerical entries. These data-entry problems were corrected by referring back to the corresponding surveys and making the necessary corrections in the output.

Qualitative responses were analyzed in FileMaker Pro. Each survey with responses to the open-ended question (item 32) or "other" responses was entered by ID number into FileMaker pro as a separate file. Any identifying data (e.g., community of practice,

employer, participant names) were not entered. Responses to "other" items were listed and are reported in Chapters IV and V. Qualitative responses to item 32 were analyzed for content within the four domains: use of CAM, attitudes and beliefs about CAM, knowledge of CAM, and communication about CAM.

Data analysis primarily consisted of descriptive statistics. Frequencies, means, ranges, and standard deviations were calculated for the demographic data on use, attitudes/beliefs, knowledge, and communication variables as appropriate. Paired t-tests were used to compare group means between NPs on their formal and informal beliefs about validation/evidence prior to using CAM. Cross-tabulations were run to examine relationships between NPs' use of CAM, attitudes/beliefs about CAM, knowledge of CAM, and their communication about CAM. Demographic data were also cross-tabulated with use and attitudes/beliefs variables. Descriptive statistics also included content analysis of the respondents' "other" responses and responses to one open-ended question (item 32). These responses are reported in aggregate form in Chapter IV with the exception of insightful individual comments, which are cited in an anonymous format in Chapter V to illustrate the main findings.

Protection of Human Subjects

Approval for this study was obtained from the Institutional Review Board (IRB) at Oregon Health Sciences University prior to dissemination of the survey. Potential benefits included an increased awareness of CAM and identification of educational need regarding these therapies for NPs. No personal risks were identified. Participation was entirely voluntary. Confidentiality was maintained through the use of an anonymous

mail survey in which participants' responses could not be linked with their names after their ID number was entered, prior to data entry. To avoid any possibility of linking responses to a particular participant after the data were entered, gender and race questions were not included. In addition, responses were reported in the aggregate with the exception of a few individual comments anonymously reported. Findings are reported in the Chapter IV.

CHAPTER IV

FINDINGS

The purpose of this study was to examine nurse practitioners' (NPs) use and knowledge of complementary/alternative medicine (CAM) and their attitudes/beliefs and communication about CAM for women's health. Six aims related to the four domains of use, attitudes/beliefs, knowledge, and communication were used to frame the study: (1) describe CAM use by NPs for women's health; (2) describe NPs' attitudes and beliefs regarding the use of CAM for women's health; (3) describe NPs' knowledge of CAM and CAM providers; (4) describe NPs' training in specific types of CAM; (5) describe NPs' communication about CAM and the importance of knowing whether their women patients use CAM; and (6) describe factors associated with the use or nonuse of CAM by NPs for women's health.

Survey data were obtained to answer the research questions specific to each of these aims. The findings are reported for each of the research questions as they relate to the specific aims. A demographic profile of the sample is provided, followed by the presentation and analysis of each research question.

Description of the Sample

The focus of this study was on NPs who were licensed in Oregon and who were currently practicing and providing health care to women (ages 18 and older). Participants were obtained through the Oregon State Board of Nursing (OSBN) database of licensed NPs. Only NP specialties that were most likely to provide health care to women were targeted. Those surveyed included a total of 582 NPs, specifically all women's-health

care NPs (WHCNPs, N = 126) and certified nurse-midwives (CNMs, N = 179), 30% of adult NPs (ANPs, N = 85), and 40% of family NPs (FNPs, N = 192). Surveys were mailed to these NPs to obtain self-reported data related to their use, attitudes/beliefs, knowledge, and communication about CAM for women's health (see Appendix E). Two follow-up mailings were sent to enhance response rate. These included a postcard reminder sent to all 582 NPs one week after the initial mailing and a second mailing of the survey to all non-respondents three weeks after the initial mailing. Of the 582 surveys mailed, 393 were returned, of which 292 were usable and 101 were unusable. Of the 101 unusable surveys, 14 were returned as undeliverable and 87 were returned uncompleted, as requested if the NP who received it did not meet the criteria for study participation (i.e., not currently practicing in Oregon or not providing health care to women). This resulted in a 60.7% response rate.

Demographics of the respondents were obtained in order to construct a sample profile to determine if the sample was representative of the population of NPs in Oregon and to assess any relationship between the demographic variables and NPs' use of CAM. The demographic items on the questionnaire included age, years of practice as a NP, average hours per week currently practicing as a NP, specialty and practice area, percent of female patients over 18 years of age, licensure/certification as a CAM provider, number of hours per week practicing as a CAM provider, integration of CAM practice with NP practice, geographic location of practice, and practice setting. Responses were analyzed using descriptive statistics.

The mean age of survey respondents was 47, which was comparable to the mean age of 46 years for active, licensed NPs in Oregon. Respondents reported practicing an average of 11 years and were all currently practicing full-time (M = 38 hours per week); Similarly, the majority of NPs in Oregon reported practicing full-time (49.4%) as opposed to part-time (34.7%). See Table 3.

Table 3

Demographics of Respondents

	N = 292			
Demographic Variables	n	M	SD	Range
Age (in years)	289	46.70	7.15	28—66
Average number of years practicing as a NP	288	11.14	7.80	.5 – 30.5
Average number of hours per week currently practicing as a NP	292	37.85	20.60	4-168[a]

Note A. [a]Range for hours per week practicing includes on-call hours.

Note B. All tables in this chapter come from the survey.

Criterion for inclusion in this study was that respondents reported greater than 1% of their patient population to be women over age 18. Although the reported range was 2% to 100%, the majority of the participants' patient population (69.7%) was composed of women.

Data obtained on education and/or practice within nursing specialty areas revealed that the majority of the NPs were educated and/or practiced in women's health care (n = 155), family health (n = 113), nurse midwifery (n = 103), and adult health (n = 71).

These data are reported in Table 4 in the order of frequency (highest to lowest) for the total number of NPs who were educated and/or practiced in any of 11 non-mutually exclusive specialty areas. Other practice specialties reported include pediatrics (n = 5), urgent care (n = 3), community and public health (n = 2), and adolescent health, cardiology, dermatology, diabetes care, HIV-AIDS, infertility, internal medicine, oncology, patient education, research, and rheumatology (n = 1 each).

Table 4

Profile of Respondent Education/Practice Specialty

NP Specialty	Educated in %	Practice %	Educated in & Practice %	Total n n	Total n %
			N = 292		
Women's health care	2.4	8.2	42.5	155	53.1
Family health	10.6	1.0	27.1	113	38.7
Nurse midwifery	4.5	1.4	29.5	103	35.3
Adult health	3.1	5.8	15.4	71	24.3
Geriatrics	3.4	2.1	4.5	29	9.9
Acute care	2.4	3.1	4.1	28	9.6
College health	3.1	2.1	1.4	19	6.5
Emergency room	2.4	3.1	1.0	19	6.5
Psychiatric/mental health	1.0	2.1	2.1	15	5.1
School health	0.3	3.8	1.0	15	5.1
Occupational health	1.0	1.4	1.4	11	3.8

Note. n represents the total number of NP answering this survey item.

The majority (92.1%) of NPs practiced only within Oregon, similar to data reported by the OSBN on NPs employed in Oregon (90.8%). A small percentage (5.5%) practiced in Oregon and another state, including the bordering states of Washington (n = 15), Idaho (n = 3), and California (n = 2). The majority of NPs (57.4%) practiced within 60 miles of Portland, Oregon, and worked in non-managed-care practice settings (75.2%). The most common settings in which the NPs practiced were office practice with a physician (n = 144; 50.3%), followed by office practice without a physician (n = 44; 16.6%)). The OSBN also reported office practice with a physician to be the most common practice setting for NPs licensed in Oregon. Although 11 NPs reported being educated and/or practicing within an occupational health setting, no one listed occupational health as their primary practice setting. A complete list of practice settings is reported in Table 5. These response options were not mutually exclusive; therefore, respondents may have checked more than one practice setting from the list provided.

Other primary practice settings not included as response options were reported. These included health maintenance organization (HMO) outpatient/inpatient clinics (n = 5), academia (n = 3), family planning (n = 3), college health (n = 2), emergency department (n = 2), non-profit family planning clinics (n = 2), research (n = 2), university hospitals and clinics (n = 2), ambulatory care (n = 1), low-income clinic (n = 1), migrant health (n = 1), office practice with FNPs, CNMs, and CAM providers (n = 1), oncology (n = 1), public health (n = 1), rural health (n = 1), and a volunteer clinic (n = 1).

Table 5

Practice Settings of Respondents

	N = 289	
Practice Setting	N	%
Office practice with MD	144	50.3
Office practice without MD	44	16.6
Independent		52.3
Group		47.7
Community health practice	31	10.8
Hospital inpatient	29	10.0
Government program	27	9.4
Hospital outpatient	16	5.6
Student health	11	3.8
Nursing education	7	2.4
Correctional facility	7	2.4

The demographic profile of respondents also included information about respondents' licensure/certification and practice as CAM providers. Two separate items addressed this issue. At the end of the survey as part of the demographic data, item 24 asked: "Are you currently licensed/certified as a CAM provider?" Only nine NPs reported current licensure/certification in CAM. Two of the nine regarded themselves as licensed/certified CAM providers by virtue of being both a NP and a CNM. Because NP and CNM licensure did not meet the definition of a CAM provider in this study, only the remaining seven licensed/certified CAM providers were included in subsequent analysis

on CAM providers. The remaining seven NPs listed their CAM provider licensure/certification as chiropractor (n = 1); practitioner of healing touch (n = 1); herbalist (n = 2); phytotherapist (n = 1); and Reiki Master (n = 1). One NP was dual-certified. The seven NPs licensed/certified in CAM reported practicing an average of 11 hours per week as CAM providers (M = 11.38, SD = 13.35, Range = 0 - 40). Five of the seven (71.4%) described their practice "mostly as a NP who integrates CAM"; one (14.3%) practiced "mostly as a NP," and one (14.3%) practiced "mostly as a CAM provider."

Earlier in the survey, NPs were asked to indicate if they were licensed/certified CAM providers for any of the nine types of CAM listed. Twenty-four NPs responded to this question, nearly three times as many as those who responded to item 24 that asked respondents whether they were licensed/certified as any type of CAM provider. These data revealed that the greatest number of NPs (n = 7) was licensed to provide energy healing. Other types of CAM licensure/certification included naturopathy/nutritional, vitamin, and/or herbal supplements (n = 5); movement therapy (n = 4); manipulative therapies (n = 2); massage therapy and/or reflexology (n = 2); biofeedback (n = 1); guided imagery, visualization, meditation, and/or relaxation therapy (n = 1); and homeopathy (n = 1). No one reported licensure/certification in Chinese medicine.

Geographic location of the NPs' practice sites was analyzed using Rural-Urban Continuum Codes (RUCC), a classification of rurality within Federal designations (Butler & Beale, 1994). This system is used to classify all US counties into 10 categories

designated as either metropolitan counties or non-metropolitan counties. Metropolitan counties include four categories based on population, while non-metropolitan counties include six categories based on population and adjacency to a metropolitan area (Ricketts, Johnson-Webb, & Taylor, 1998). RUCC codes for Oregon counties were obtained to differentiate whether respondents practiced in metropolitan or non-metropolitan settings (Economic Research Services, 3/30/00). To determine these differences, two new variables were created from the RUCC categories for Oregon counties. All metropolitan- and non-metropolitan-designated counties were recoded either metropolitan or non-metropolitan. Analysis of these data indicated that 65.5% (n = 177) of NPs practiced within metropolitan-designed counties with the remaining 34.4% (n = 93) practicing within non-metropolitan-designated counties.

Summary

Overall, characteristics of the NPs in this study were similar to NPs licensed in Oregon with regard to age, employment status, and practice setting. The majority of the 292 respondents were 40 to 54 years old and practiced full time in Oregon. The most common practice settings were non-managed-care office settings with physicians in metropolitan areas. Respondents were primarily educated and/or practiced either in women's health care, family health, nurse midwifery, or adult health. The majority of their patient populations were women. Of the 292 respondents, 24 reported licensure/certification in CAM as CAM was defined in this study.

Aims and Research Questions

The study had six specific aims, and data were collected to address each aim based on related research questions. The findings are reported for each research question within the aims. These aims addressed CAM modalities that had been categorized into nine types, each of which included one or more modality. The categorization process was based on a review of existing surveys, a pilot study, and feedback from an expert panel of NPs during the tool development process of this study. The nine types included were biofeedback; Chinese medicine; energy healing; guided imagery, visualization, meditations, relaxation therapy; homeopathy; manipulative therapies; massage therapy/reflexology; movement therapy; and naturopathy/nutritional, vitamin, and/or herbal supplements.

In addition, 16 health conditions specific to or prevalent among women were used in this study to determine reasons for CAM use. The conditions included were based on pilot-study data and input from the expert panel of women's health-care providers during survey development. These conditions were: breast tenderness; chronic pain; digestive disorders; fatigue; headaches and/or migraines; menstrual disorders; mental health, stress, anxiety, and/or depression; perimenopause and/or menopause; pregnancy and/or prenatal symptoms; sleep disorders; stress and/or urinary incontinence; urinary tract infections; vaginal infections; weight control; and wellness and/or health promotion.

Aim 1: Use of CAM

Aim 1 was to describe CAM use by NPs for women's health. Four research questions were posed to address this aim directed at NPs' use of CAM. The first question

was "What proportion of the NPs recommend, refer, and provide CAM?" Responses from survey items 4, 13, and 17 were analyzed to answer this research question. Item 4 asked, "Do you ever recommend CAM to your female patients?" Item 13 asked, "Do you ever refer patients to CAM providers?" The majority (93.7%, n = 269) of NPs reported recommending CAM to their female patients. Only 11 indicated they had not recommended CAM. Likewise, the majority (83.6%, n = 239) of NPs reported they had referred patients to CAM providers while 47 had not.

Item 17 asked if NPs recommended, referred for, or provided any of the 9 types of CAM for any of the 16 women's health problems listed. Of the 292 respondents, 275 reported using some type of CAM for one or more women's health problem(s). Only 11 NPs had never recommended, referred, or provided CAM for any of the women's health problems listed. Six respondents did not indicate use one way or another and this was reported as missing data.

The second research question asked, "What types of CAM do NPs use for women's health?" Data from item 17 were analyzed to determine the most common types of CAM used (i.e., recommended, referred, or provided). This was determined in two ways. First, the number of NPs ever recommending, referring, and/or providing CAM for any of the 16 women's health problems identified in the survey was determined by creating new variables for the 9 types of CAM and the 16 women's health problems listed in item 17. The new variables were created through a process of transforming the *recommend, refer, provide* variables for every type of health problem to an "anyuse" variable specific to each type of CAM. For example, the target variable "any bio" was

created by combining responses specific to biofeedback for all of the 16 women's health problems.

The transformation process for each type of CAM variable resulted in an "any" variable for each type of CAM in which "0" represented no use (i.e., recommend, refer, and provide) of the "any" type of CAM for any of the 16 health conditions listed. "1" represented use (i.e., recommend, refer, and provide) of the "any" type of CAM for at least one health condition. Frequencies and percents were computed to represent the number of NPs using each type of CAM for the 16 problems. These data indicated that naturopathy/nutritional, vitamin, and/or herbal supplements were used most often and that energy healing was the least-used option (see Table 6).

Table 6

CAM Used for Any of 16 Women's Health Conditions

	N = 291	
Type of CAM	n	%
Naturopathy/nutritional, vitamin, herbal supplements	251	86.3
Massage therapy, reflexology	223	76.6
Guided imagery, visualization, meditation, relaxation	207	71.1
Manipulative therapies	204	70.1
Chinese medicine	184	63.2
Biofeedback	174	59.8
Movement therapy	159	54.6
Homeopathy	100	34.4
Energy healing	94	32.2

"What types of CAM do NPs use for women's health?" was also answered by obtaining frequencies for CAM use associated with each type of CAM for the specific women's health problems listed. The frequencies for "Recommend," "Refer," or "Provide" were obtained by totaling each column on item 17. The column total represented the total number of times (i.e., women's health reasons) that NPs had ever recommended, referred, and/or provided a specific type of CAM for any of the 16 women's health problems. (Note: If all 275 NPs who completed this item had used any one type of CAM for all 16 health problems, the column total would be 4400.) These findings are reported in descending order from the most to the least recommended type of CAM in Table 7. Consistent with previous analysis, naturopathy/nutritional, vitamin, and/or herbal supplements was the most common type of CAM recommended, referred, and provided by NPs. Energy healing was recommended least often and among the least-often referred for; however, it was among the four most common types of CAM provided.

The third research question specific to NPs' use of CAM asked: "What are the most common types of women's health conditions that NPs use CAM for?" This question was answered by combining any use of CAM for each woman's health condition. Use was measured by combining the frequencies obtained across each row in item 17. These included the numbers of NPs who recommended, referred, and provided each type of CAM for each woman's health problem. Therefore, the total frequency for a particular health condition could exceed the number of NPs in the study if NPs used more than one type of CAM for a health problem. For example, a NP might report using

herbal supplements for three problems. The most common types of health problems and the three most common types of CAM used by NPs to treat them are reported in Table J-1 (see Appendix J). CAM was used most often to treat chronic pain, followed by musculoskeletal/joint problems, and headaches and migraines. CAM was used least often to treat stress/urinary incontinence, breast tenderness, and urinary tract infections.

Table 7

Frequency of Specific Use of CAM for Any of 16 Women's Health Problems

	N = 275		
	Frequency of CAM Use		
Type of CAM	Recommended	Referred	Provided
Naturopathy/nutritional, vitamin, herbal supplements	1629	588	569
Guided imagery, visualization, meditation, relaxation	802	14	198
Massage therapy, reflexology	731	552	57
Chinese medicine	601	517	26
Movement therapy	586	393	15
Biofeedback	426	348	25
Manipulative therapies	407	434	34
Homeopathy	323	217	31
Energy healing	278	209	51

The fourth and final research question related to the use of CAM was "Why do NPs include CAM for women's health?" These data were obtained from survey items 9 and 14. Item 9 asked, "When you discuss treatment options with your patients for women's health, which one of the following options best describes your own practice?"

The NPs were instructed to check only one of the five mutually exclusive options. The majority (68.8%, n = 201) answered with "Always include allopathic treatment options but sometimes include CAM treatment options." Other responses included "Always include both allopathic and CAM treatment options" (14.7%, n = 43) and "Generally include only allopathic treatment options" (12.0%, n = 35). Less than 1% reported they "Generally include only CAM treatment options" (0.7%, n = 2) or "Always include CAM treatment options but sometimes include allopathic treatment options" (0.3%, n = 1).

Responses from item 14 were also used to answer the research question, "Why do NPs use CAM for women's health?" Only the responses to item 14 from the 239 NPs who reported that they had ever referred patients to CAM providers from item 13 were analyzed to answer this question. Item 14 asked, "Do you refer your patients for CAM for the following reasons?" NPs were asked to respond to 10 reasons by checking either "Yes" or "No." Over 90% of the 239 NPs who refer to CAM providers do so because CAM techniques fit the patient's belief system or values (n =228), because the patient requests it (n = 226), and/or because it complements their own treatment plan (n = 215). NPs are least likely to refer because they are CAM providers (n = 30) or have received referrals from CAM providers (n = 61) (see Table 8). Work environment restrictions for CAM provider referrals based on reimbursement for chiropractic and biofeedback were additional reasons cited.

Table 8

Reasons NPs Refer Patients for CAM

	N = 239	
Reason for CAM Referral	n	%
Fits with the patient's belief systems or values	228	97.0
Patient request	226	95.4
Complements the NP's own treatment plan	215	91.9
Patient has culturally-based values and preferences	201	88.2
Patient doesn't improve with an allopathic treatment	180	80.0
History of success with a reputable CAM provider in the community	181	78.4
Addresses a particular illness better	166	72.8
Personal and successful experience with the CAM treatment	141	62.4
Have received CAM referrals from the CAM provider being referred to	61	27.9
Personally a CAM provider	30	13.8

Aim 2: Attitudes and Beliefs About CAM

Aim 2 stated: Describe NPs' attitudes and beliefs regarding the use of CAM for women's health. Two research questions were related to this domain of attitudes/ beliefs. The first was, "What attitudes do NPs have regarding the use of CAM for women's health?" Responses from items 1 and 2 on the survey were analyzed to answer this question (see the survey in Appendix E). Item 1 asked, "What type of validation or evidence do you depend on before recommending or using an allopathic treatment for your female patients?" Similarly, item 2 asked, "What type of validation or evidence do you depend on before recommending or using CAM for your female patients?" Each of

these items included a list of nine types of validation/evidence and an "Other" option to be answered on a five-point Likert scale (1 = not important, 5 = very important). Formal methods of validation/evidence were identified as theoretical and scientific basis, laboratory evidence and clinical trials. Informal methods were identified as colleagues' and patients' experience and recommendations, personal/family experience, supporting literature, and prevailing standard of care.

Paired t-tests were used to compare group means between NPs' responses reflecting allopathic beliefs (item 1) and responses reflecting CAM beliefs (item 2) prior to treatment use for patients, as reported in Table 9. Group means for allopathic beliefs were significantly higher for each of the formal methods of validation/evidence when compared to group CAM beliefs and for three of the informal methods. In other words, respondents required more validation for allopathic treatments prior to use with patients. Furthermore, group means for the formal methods of validation were ranked in the same order of importance, from scientific basis, clinical trials, and laboratory evidence to theoretical basis for allopathic treatments and CAM treatments. Supporting literature was regarded as the most important type of informal evidence for both allopathic use ($\underline{M}$ = 4.12) and CAM use ($\underline{M}$ =3.96). Personal/family experiences and patients' experiences and recommendations were considered to be more important for CAM use than for allopathic use. However, these differences were not statistically significant. Additional types of validation/evidence listed by respondents included expense of treatment, continuity of data or information about the treatment method, and the longevity of the

practice or treatment (i.e., for how many years the treatment has been used safely and effectively in practice).

Table 9

Evidence Needed Before Recommending/Using CAM for Women Patients

	N = 286					
	Treatment				Statistics	
	Allopathic		CAM			
Type of validation/evidence	M	SD	M	SD	t	df
Formal						
Scientific basis	4.26	.74	3.81	1.00	9.64**	284
Clinical trials	4.25	.75	3.69	1.01	10.20**	283
Laboratory evidence	4.01	.85	3.60	1.00	8.45**	280
Theoretical basis	3.75	.94	3.59	0.93	4.53**	282
Informal						
Supporting literature	4.12	.76	3.96	0.86	.84**	286
Prevailing standard of care	4.06	.86	3.51	1.10	.78**	283
Colleagues' Experience/recommendation	3.95	.86	3.84	0.93	.35*	282
Patients' Experience/recommendation	3.37	.95	3.46	1.05	-1.81	282
Personal/family experience	3.30	1.13	3.40	1.16	-1.89	283

*p < .05. **p < .001.

Note. t-test summary of paired differences of validation.

The second research question related to NPs' attitudes/beliefs regarding CAM use was, "What beliefs do NPs have about the advantages and disadvantages of the use of CAM for women's health?" Responses from item 3 were analyzed to answer this question. Item 3 asked whether or not the NPs agreed with 13 general statements about CAM. The first nine statements were worded as advantages and the last four were worded as disadvantages.

As seen in Table 10, over 90% agreed with the statements that CAM can improve quality of life (97.9%), can provide patients with hope when allopathic remedies have failed (95.1%), can make positive contributions to health care when there is more evidence to assure its safety and efficaciousness (94.7%), and can provide patients with useful treatment alternatives when allopathic remedies have failed (94.5%). More than half agreed with four other statements regarding advantages of CAM. However, less than half (48.9%) of the NPs agreed with the statement that "CAM can cure disease." Although the majority of NPs agreed with eight of nine advantages CAM brings to health care, the majority also agreed with statements that CAM can endanger patients (90.8%), can have a negative impact on patients (87.5%), and can increase health care costs (76.6%). Only three NPs of the total 287 agreed with the statement that "CAM does not make any positive contributions to health care." Twelve "Other" statements were provided by NPs regarding additional advantages or disadvantages of CAM. These included concerns about prescribing CAM due to lack of knowledge or familiarity with the treatment, the unaffordability of CAM for lower-income patients, and the benefits of integrating healing and spirituality within CAM.

Table 10

NPs' Beliefs About Advantages/Disadvantages of CAM

Contributions of CAM	N = 287	
	n	%
Advantages		
CAM can improve quality of life.	285	97.9
CAM can provide patients with hope when allopathic remedies have failed.	272	95.1
CAM can provide patients with useful treatment alternatives when allopathic remedies have failed.	274	94.5
CAM can make positive contributions to health care when there is more evidence to assure its safety and efficaciousness.	270	94.7
CAM can empower patients to take responsibility for their own health.	257	88.9
CAM can offer treatment options with fewer uncomfortable side effects.	225	78.4
CAM can provide you, the practitioner, with a more meaningful way to help heal.	184	64.8
CAM can offer less expensive treatment options.	176	60.9
CAM can cure disease.	138	48.9
Disadvantages		
CAM can endanger patients if not included by a provider in the total plan of Care due to untoward interactions.	256	90.8
CAM can have a negative impact on patients due to lack of quality assurance and lack of standardization regarding product safety and efficacy.	251	87.5
CAM use can increase health-care costs to patients.	219	76.6

Aim 3: Knowledge of CAM

Aim 3 sought to discover NPs' knowledge of CAM and CAM providers. There were four specific research questions that focused on the domain of NPs' knowledge of CAM. The first research question asked, "How important is it for NPs to be knowledgeable about CAM for women's health?" Item 6 on the survey asked NPs to respond to this question on a 5-point Likert scale (1 = not important, 5 = very important). The mean response was heavily weighted toward "very important" ($M = 4.22$). There were 286 NPs who responded to this item. The greatest number ($n = 124$, 43.8%) reported that it was "very important" to be knowledgeable about CAM for women's health while 39.6% ($n = 112$) said "important," 13.1% ($n = 37$) were neutral, 2.1% ($n = 6$) said "less important." Only 4 NPs (1.4%) indicated that it was "not important."

The second research question related to knowledge asked, "What types of CAM are NPs interested in learning more about?" Responses to item 8, asking which of nine types of CAM they wanted to learn more about, were analyzed to answer this question. NPs also listed their "interest in learning more" about "Other" types of CAM such as magnets, nerve stimulation, herbal medicine not limited to supplements, energetic medicine, and diet and exercise. As noted in Table 11, one-half of the NPs surveyed were interested in learning more about Chinese medicine (52.4%) and naturopathy/nutritional, vitamin, and herbal supplements (50.0%). The least amount of interest was for "learning more" about manipulative therapies (27.7%) and massage therapy or reflexology (31.5%). Interest was also noted for "other" CAM listed by respondents. These included magnet therapy ($n = 1$), diet and exercise ($n = 1$), and herbal medicine ($n = 1$).

The third research question associated with NPs' knowledge asked, "What knowledge do NPs have about specific types of CAM?" Responses to item 8 were analyzed to answer this research question. These included responses of "know basic principles," "know providers to refer to," and "know requirements for practice in Oregon" in reference to the nine types of CAM previously described. One-half or more of the NPs reported knowing the basic principles of all nine types of CAM listed. Three quarters (77.7%) of them reported knowing the basic principles of guided imagery, visualization, meditation, and/or relaxation therapy. This was followed by knowledge of the basic principles of naturopathy and nutritional, vitamin, and/or herbal supplements (73.3%) and biofeedback (71.9%) (see Table 11). Basic knowledge was also reported for "Other"' types of CAM listed by respondents, including magnet therapy ($\underline{n} = 1$), diet and exercise ($\underline{n} = 1$), and herbal medicine ($\underline{n} = 1$).

NPs' knowledge of CAM providers to refer to was the highest for manipulative therapies (71.9%), followed by massage therapy and reflexology (67.1%), Chinese medicine (56.5%), and naturopathy and nutritional, vitamin, and/or herbal supplements (52.7%). NPs reported the least knowledge of CAM providers to refer to for energy healing (30.8%) and guided imagery, visualization, meditation, relaxation therapy, and homeopathy (41.4%) (see Table 11). Respondents also reported knowing "Other" CAM providers to refer to, specifically for magnet therapy ($\underline{n} = 1$), diet and exercise ($\underline{n} = 1$), and herbal medicine ($\underline{n} = 1$).

Table 11

NPs' Self-Reported Knowledge of CAM

	N = 292							
Types of CAM	Interested in learning more		Know basic Principles		Know Providers to Refer to		Know Oregon Practice Requirements	
	n	%	n	%	N	%	n	%
Biofeedback	114	39.0	210	71.9	109	37.3	11	3.8
Chinese medicine	153	52.4	175	59.9	165	56.5	30	10.3
Energy healing	129	44.2	145	49.7	90	30.8	14	4.8
Guided imagery, visualization, meditation, relaxation therapy	104	35.6	227	77.7	121	41.4	15	5.1
Homeopathy	129	44.2	164	56.2	121	41.4	16	15.5
Manipulative therapies	81	27.7	178	61.0	210	71.9	53	18.2
Massage therapy/reflexology	92	31.5	196	67.1	196	67.1	48	16.4
Movement therapy	129	44.2	152	52.1	119	40.8	13	4.5
Naturopathy/nutritional, vitamin, herbal supplements	146	50.0	214	73.3	154	52.7	23	7.9

NPs' knowledge of CAM providers to refer to was also assessed in relation to practice setting. Responses of those NPs practicing in metropolitan and non-metropolitan practice settings were cross-tabulated with knowledge of CAM providers to refer to for

each of the nine types of CAM. As reported in Table 12, a higher percentage of NPs practicing in non-metropolitan practice settings were aware of CAM providers to refer to for seven of the nine types of CAM as compared with NPs in metropolitan practice settings although these differences were not significant using chi-square.

Table 12

Relationship of Practice Location to Knowledge of CAM Providers for Referral

	N = 270			
	Practice Setting			
	Metropolitan		Non-metropolitan	
Knowledge of CAM Provider Type	n	%	n	%
Biofeedback	61	34.5	39	41.9
Chinese medicine	100	56.5	51	54.8
Energy healing	51	28.8	34	36.6
Guided imagery, visualization, meditation, relaxation	73	41.2	40	43.0
Homeopathy	72	40.7	44	47.3
Manipulative therapies	122	68.9	73	78.5
Massage therapy, reflexology	113	63.8	69	74.2
Movement therapy	73	41.2	40	43.0
Naturopathy/nutritional, vitamin, herbal supplement	93	52.5	48	51.6

Fewer than 20% of NPs surveyed reported having knowing the requirements for practice in Oregon for any of the nine categories of CAM included in the survey. NPs were most knowledgeable about requirements for manipulative therapies (18.2%), massage therapy and reflexology (16.4%), and homeopathy (15.5%). The least amount

of knowledge of practice requirements was reported for biofeedback (3.8%) (see Table 12). Knowledge of practice requirements were also reported for two "Other" types of CAM: magnet therapy (n = 1) and diet and exercise (n = 1).

The fourth and final research question related to NPs' knowledge asked, "How do NPs obtain knowledge about CAM and CAM providers for women's health?" Responses from survey items 7 and 15 were analyzed to answer this research question. Item 7 asked respondents to indicate whether they had obtained CAM information from any of the 15 options provided and an "Other" option. A dichotomous yes/no response format was used. The most common methods reported were conference/seminar (93.1%), colleagues (92.8%), and patients (85.2%). Information was least often obtained from undergraduate nursing training (17.3%), professional organizations/institutions (37.3%), and NP training (43.3%). These findings are reported in Table 13 in which the number represents the total number of respondents answering yes or no and the percent reflects the number of respondents answering 'yes' to the question (i.e., using the method listed).

NPs also listed methods used to obtain CAM information that were not included in the 15 options provided in item 7. They were lay books and women's magazines (n = 8), personal training/licensure (n = 3), study groups and journal clubs (n = 3), CD-ROMs and audiotapes (n = 3), personal use and experience (n = 2), and pharmacists (n = 1). Only two NPs reported they had never obtained information about CAM.

Table 13

Ways NPs Obtain Information About CAM

	N = 291	
Method	n	%
Conference/seminar	271	93.1
Colleagues	270	92.8
Patients	247	85.2
Nursing journals/books	227	78.5
CAM providers	204	71.3
Family/friends	190	66.4
Other CAM literature	168	58.3
Non-nursing allopathic health professional journals	145	50.9
Television/radio news reports	139	49.3
Internet	133	46.5
CAM peer-reviewed journals	124	43.7
NP training	122	43.3
Professional organizations/institutions	106	37.3
Undergraduate nursing training	49	17.3

The relationship between NPs' practice settings and methods of obtaining information about CAM was examined through cross-tabulation. Responses of NPs practicing in metropolitan and non-metropolitan settings were cross-tabulated with their responses to methods used to obtain information about CAM. Chi-square was used to establish significance. The responses between these two groups were similar for 8 of 12

methods. Although not significant, a higher percentage of NPs practicing in metropolitan areas used "Other CAM literature" (i.e., non-professional literature) and professional organizations and institutions compared to NPs in non-metropolitan areas. A higher percentage of NPs in non-metropolitan areas used family and friends and their undergraduate nursing training compared to NPs in metropolitan areas. A significant difference between these two groups was noted in the higher percentage of NPs in non-metropolitan practice settings (64.4%) using non-nursing allopathic health professional journals to obtain information about CAM [x^2 (1, n = 263) = 8.366, p < .01]. A significantly higher percentage of NPs in metropolitan practices (75.3%) obtained information from CAM providers [x^2 (1, N = 265) = 3.898, p < .05]. Over 85% of NPs in both groups used conferences, seminars, colleagues, and patients to obtain CAM information (see Table 14).

Responses to item 15 were analyzed to address the question of how NPs obtain knowledge about CAM providers for women's health. Respondents were asked to indicate whether they had obtained information about CAM providers from any of the six options provided and an "Other" option. A dichotomous yes/no response format was used. The majority of NPs relied on recommendations from colleagues (n = 228; 96.2%) and patients (n = 219; 93.2%). Professional organizations/institutions were used by 39.3% (n = 86). One-fourth (n = 56; 25.3%) obtained information through a CAM provider who is a member of their provider panel or practice group and one-fifth used telephone directories (n = 46; 21.6%) and advertisement media (n = 43; 20.5%). Beyond the six options provided, NPs also reported obtaining information about CAM providers

from personal/family experience (n = 6); conferences (n = 4); knowledge of reimbursement for patients' use of CAM providers (n = 2); allopathic journals (n = 2); seminars and workshops (n = 1); CAM providers (n = 1); community education (n = 1), and staff meetings (n = 1). One NP commented, "Information on CAM providers is not available" and another expressed an interest in obtaining a list of CAM providers' names, practice locations, licensure/certification, and information on reimbursement for their services.

Aim 4: Training in CAM

Aim 4 stated: Describe NPs' training in specific types of CAM. The research question that addressed this aim asked, "What type of training do NPs have in CAM?" Responses from the last two columns in item 8 were analyzed to answer this research question, where NPs were asked to check whether they had obtained "formal" education and/or licensure/certification for any of the nine types of CAM listed.

Table 14

Relationship of Practice Settings to Ways to Obtain CAM Information

	N = 291			
	Practice Setting			
	Metropolitan		Non-metropolitan	
Method Used to Obtain CAM Information	n	%	n	%
Conference/seminar	176	93.8	93	92.5
Colleagues	176	93.8	93	94.6
Patients	175	85.5	93	87.1
Nursing journals/books	175	79.4	92	78.3
CAM providers	174	75.3	91	63.7
Family/friends	173	64.7	91	70.3
Other CAM literature	174	59.2	92	55.4
Television/radio news reports	171	50.3	90	50.0
Internet	173	48.6	92	47.8
Allopathic health professional journals	173	45.7	90	64.4
CAM peer-reviewed journals	172	43.6	92	46.7
Professional organizations/institutions	171	39.2	91	30.8

Note. Percents correspond with practice location and n represents the total number of NPs answering this survey item.

Fewer than 50 of the total respondents had received formal education for any one of the nine types of CAM; however, for each type of CAM, at least five had received formal education. The greatest number of NPs (n = 47, 16.1%) reported receiving formal education in two categories of CAM: guided imagery, visualization, meditation, and/or relaxation; and naturopathy/ nutritional, vitamin, and/or herbal supplements. These types

of CAM were followed by formal education in energy healing (n = 25, 8.6%); massage therapy/reflexology (n = 18, 6.2%); movement therapy (n = 16, 5.5%); Chinese medicine (n = 10, 3.4%); manipulative therapies (n = 8, 2.7%), and biofeedback (n = 6, 2.1%). The least amount of formal CAM education was obtained for homeopathy (n = 5, 1.7%). Other types of formal education had been obtained in magnet therapy (n = 1), nerve stimulation (n = 1), and herbal medicine (n = 1).

As previously noted in the demographic profile of respondents, 24 NPs identified themselves as licensed/certified CAM providers. The greatest number of NPs (n = 7) was licensed to provide energy healing. Other types of CAM licensure/certification included naturopathy/nutritional, vitamin, and/or herbal supplements (n = 5); movement therapy (n = 4); manipulative therapies (n = 2); massage therapy and/or reflexology (n = 2); biofeedback (n = 1); guided imagery, visualization, meditation, and/or relaxation therapy (n = 1), and homeopathy (n = 1). No one reported licensure/certification in Chinese medicine.

Aim 5: Communication About CAM

Aim 5 stated: Describe NPs' communication about CAM and the importance of knowing whether their women patients use CAM. Three research questions addressed this aim. The first asked, "How important is it for NPs to know whether their female patients use CAM?" Responses from item 10 asking, "How important is it to you to know if your female patients use CAM?" were used to answer this question. NPs were asked to respond to this question on a 5-point Likert scale (1 = not important, 5 = very important). Based on frequency of response, the responses were ranked from "very

important" to "important" in descending order. More than half (54.5%) of the 286 NPs responding indicated that it was "very important" to know (M = 4.31) followed by "important" (28.3%), "neutral" (11.5%), "less important" (4.9%), and "not important" (0.7%).

The second research question related to the domain of communication was, "How do NPs communicate about CAM with their female patients?" This question was addressed through two sub-questions: "In the provider/patient interaction between the NP and the female patient, who initiates the discussion about CAM?" "In the provider/patient interaction between the NP and the female patient, when does discussion about CAM occur?" Data from items 11 and 12 were analyzed to address these research questions.

Item 11 asked, "If you and your patients discuss CAM, who is more likely to bring it up?" Descriptive statistics were used to report the frequencies of each of the four response options in percentages. These options included "You," "Your patient," "Usually both of you," and "Neither of you. CAM is never discussed." One-half (51.0%; $\underline{n}$ = 148) of the NPs reported that CAM was addressed usually by both the NP and the patient. One-quarter (26.2%, $\underline{n}$ = 76) reported that their patients were more likely to bring up the discussion about CAM, and one-fifth (21.4%, $\underline{n}$ = 62) brought up the discussion themselves. Only 4 NPs (1.4%) selected "Neither of you" as their response.

Item 12 was analyzed to address the second sub-question regarding provider/patient discussion about CAM. Item 12 asked, "Do you ask your female patients about their use of CAM in the following circumstances?" NPs were asked to

check yes or no from a list of eight circumstances and an "Other" option. The circumstances were not mutually exclusive; therefore, more than one could be checked. As seen in Table 15, NPs asked their patients most often "Routinely, annually" (60.3%) followed in frequency by "Every initial/ new patient visit" (59.9%). Additional responses listed by NPs included depending on the patient or if the patient is open to alternative options (n = 3), when asking about medications (n = 2), if the patient requests information about CAM (n = 1), and no particular trigger or pattern (n = 1).

Table 15

When NPs Ask Female Patients About CAM Use

	N = 292	
Circumstances	n	%
Routinely, annually	155	60.3
Every initial/new patient visit	175	59.9
Only for specific health problems	127	43.5
Subsequent visits, after a relationship has been established	125	42.8
When there has been recent media attention about CAM	94	32.2
Only if you think a patient may be using CAM	90	30.8
Routinely, every visit	57	19.5
Only after allopathic treatment has not been effective	47	16.1

The final research question related to the domain of NPs' communication about CAM asked, "What is the professional communication about CAM?" Responses from survey item 16, which asked about follow-up to referrals to CAM providers, were

analyzed to address this research question. Of the 239 NPs who reported referring to CAM providers from item 13, 42.7% (n = 102) followed up with CAM providers after referrals. Fifty percent (n = 50) of these NPs who referred indicated that they usually followed up with formal written communication and/or a chart note, 46.0% (n = 46) followed up informally with verbal communication and no chart note, and 4 % (n = 4) reported using both formal and informal methods of follow-up with CAM providers.

Aim 6: Factors Associated with CAM Use

Aim 6, the final aim, was to describe factors associated with use and nonuse of CAM by NPs for women's health. Four research questions were asked that addressed this final research aim. The first research question asked, "What are the factors (personal, practice, and demographic) that influence NPs' use and nonuse of CAM for women's health?" Responses from survey items 5, 18, 32, and the specific demographic items addressed this question.

Item 5 asked, "Do you agree with each of these statements about the use of CAM for your own female patients?" Twelve statements were provided (9 positive and 3 negative). A dichotomous yes/no response format was used for response to each statement. As reported in Table 16, the majority (90%) of NPs reported that CAM is beneficial to patients, that patients request it, and that CAM enhances practice options. Likewise, the majority (90.8%) of NPs believed that CAM is within their scope of practice although 18.9% expressed fear of jeopardizing their license to practice by using CAM in their practices. While generally positive about the benefits of CAM, nearly

three-quarters (74.8%) of the NPs also admitted/reported concern about interactions between CAM and allopathic remedies.

Table 16

NPs' Beliefs about Using CAM for Women Patients

	N = 289	
Beliefs About the Use of CAM	n	%
CAM enhances your practice options.	266	92.4
Use of CAM is within your scope of practice as a NP.	256	90.8
CAM is beneficial/useful to patients in your practice.	253	90.0
CAM is within your personal practice philosophy.	250	87.1
Your patients request CAM.	251	86.9
You are concerned about untoward interactions of CAM with Allopathic treatment remedies.	211	74.8
CAM is readily accessible/available to your patients.	170	60.3
CAM referrals and/or practice are encouraged in your practice setting.	112	39.6
You are afraid of personal liability for promoting/supporting CAM use in your practice.	82	28.9
You feel well-trained/knowledgeable in CAM.	66	23.9
CAM is reimbursed and/or relatively inexpensive.	55	19.6
You are afraid of jeopardizing your license to practice as a NP if you use CAM in your practice.	54	18.9

Item 18 asked, "For your own personal health-care needs requiring a provider, do the following statements apply to you?" Five statements regarding choice of provider

were included with an "Other" option. A dichotomous yes/no response format was used for each statement. Most of the NPs (60.5%, n = 176) reported routinely seeking treatment from an allopathic provider first compared with only 9.4% (n = 22) who sought treatment from a CAM provider first. However, NPs' choice of a CAM or allopathic provider was also based on the health issue for which treatment was sought (71.4%, n = 182) and whether the care was reimbursed (50.4%, n = 120). Less than one-fourth of the NPs (21.1%, n = 44) indicated that they never seek treatment from a CAM provider. One NP indicated that his/her health-care provider provides both CAM and allopathic treatment options and one indicated he/she never seeks treatment, using personal knowledge to self-treat.

Items related to demographics and CAM use were cross-tabulated, and chi-square was used to determine factors significantly associated with CAM use. Specifically, age, personal use of CAM, number of years in practice, NP specialty, and items related to practice setting were cross-tabulated with items reflecting CAM use. First, a new age variable was created by recoding age into 3 categories: 28-42, 43 to 51, and 52 to 66. The age range of respondents was 28 to 66 years. Next, the recoded age variable was cross-tabulated with the "anyuse" variable representing any use (recommend, refer, and/or provide) of CAM for each of the nine types of CAM for women's health. As seen in Table 17, over all the oldest group of NPs had the lowest percentage of use of all types of CAM with the exception of biofeedback and energy healing, which were also among the least used. NPs in the 43-to-51 age group ranked in the highest percentage of use for seven of the nine types of CAM. Naturopathy/nutritional, vitamin, and/or herbal

supplements was the most commonly used type of CAM across age groups. Energy healing and homeopathy were among the least-used types of CAM across age groups. However, use of CAM and NPs' ages were statistically significant only for biofeedback [x^2 (2, N = 288) = 13.370, p < .01]; manipulative therapies [x^2 (2, N = 28) = 6.017, p < .05]; and naturopathy/nutritional, vitamin, and/or herbal supplements [x^2 (2, N = 288) = 6.019, p < .05].

Table 17

Relationship of CAM Use to NPs' Age

	N = 288					
	Age Group					
	28-42	(n = 74)	43-51	(n = 150)	52-66	(n = 64)
Type of CAM	n	%	n	%	n	%
Biofeedback	32	43.2	103	68.7	38	59.4
Chinese medicine	49	66.2	99	66.0	36	56.3
Energy healing	19	25.7	55	36.7	20	31.3
Guided imagery, visualization, meditation, relaxation therapy	52	70.3	114	76.0	40	62.5
Homeopathy	25	33.8	60	40.0	15	23.4
Manipulative therapies	52	70.3	114	76.0	38	59.4
Massage therapy/reflexology	62	83.8	117	78.0	44	68.8
Movement therapy	40	54.1	90	60.0	29	45.3
Naturopathy/nutritional, vitamin, herbal supplements	66	89.2	135	90.0	50	78.1

Note. Frequencies and percents correspond with age groups.

Responses to item 18 and item 4 were cross-tabulated to determine the relationship between NPs' personal use of CAM and their recommendation of CAM for women's health. Chi-square was used to determine the statistical significance of these relationships. Item 18 asked, "For your own personal health-care needs requiring a provider, as opposed to self-care, do the following statements apply to you?" Five statements related to provider choice based on provider type (i.e., CAM or allopathic), health issue, provider reimbursement, and an "Other" option were provided. Each statement included a dichotomous yes/no response choice. Responses were cross-tabulated to whether they had ever recommended CAM (Item 4). Over 90% recommended CAM whether or not they routinely sought their own personal health care from an allopathic provider or a CAM provider. This was true even for the NPs who reported never seeking treatment from a CAM provider for themselves. A greater percentage of NPs (97.2%) determined their own provider choice based on a particular health issue referred for CAM (unclear; restate, please); however, these findings were nonsignificant (see Table 18).

Table 18

Relationship of NPs' Personal Use of CAM to Recommendation of CAM to Patients

	N = 253			
	CAM Recommendation			
	Yes		No	
Personal Use of CAM	n	%	n	%
Routinely seek allopathy first	162	93.1	72	96.0
Routinely seek CAM first	21	95.5	198	93.4
Provider choice differs based on the health issue	174	97.2	64	86.5
Provider choice differs based on reimbursement	113	96.6	108	91.5
Never seek treatment from a CAM provider	39	88.6	154	93.9

Note. Frequencies and percents correspond with personal use of CAM.

A relationship between the number of years NPs have been in practice and use of each of the nine types of CAM in this study was also assessed. Prior to running cross-tabulations between these variables, a new variable was created from the number of years' practiced, item 20). The new variable was created by recoding the number of years practiced into three 10-year categories: 0.5 to 10, 11-20, and 21 to 30.5. The range of years practiced by respondents was .5 to 30.5. The new variable and the "anyuse" variable representing any patient use (recommend, refer, and/or provide) of CAM for each of the nine types of CAM were cross-tabulated to determine if differences in years practiced existed for the types of CAM used in practice. Chi-square was used to determine statistical significance. Overall, NPs in the group with the most years in

practice reported the lowest percentage of CAM use for seven of nine types of CAM. Across all three groups, naturopathy/nutritional, vitamin and/or herbal supplements were used by the greatest number of NPs while energy healing and homeopathy were used the least. The relationships were statistically significant for only biofeedback [x^2 (2, N = 287) = 9.385, p < .01]; and manipulative therapies [x^2 (2, N = 287) = 7.157, p < .05]. These findings were consistent with those found across age groups as reported in Table 17. See Table 19.

Table 19

Relationship of NPs' CAM Use and Years in Practice

	N = 287					
	Number of Years in Practice					
	0.5 to 10 N = 156		11 to 20 N = 93		21 to 30.5 N = 38	
Type of CAM	n	%	n	%	n	%
Biofeedback	82	52.6	67	72.0	24	63.2
Chinese medicine	98	62.8	64	68.8	21	55.3
Energy healing	43	27.6	35	37.6	15	39.5
Guided imagery, visualization, meditation, relaxation therapy	112	71.8	69	74.2	25	65.8
Homeopathy	56	35.9	35	37.6	9	23.7
Manipulative therapies	113	72.4	70	75.3	20	52.6
Massage therapy/reflexology	124	79.5	71	76.3	27	71.1
Movement therapy	87	55.8	53	57.0	18	47.4
Naturopathy/nutritional, vitamin, herbal supplements	141	90.4	78	83.9	31	81.6

Note. Frequencies and percents correspond with the number of years practiced.

Cross-tabulations were also run to examine the relationship between the type of practice setting in which NPs' practice and their use of CAM. The categorization of NPs as practicing in metropolitan and non-metropolitan settings described earlier was correlated with each "anyuse" variable for the nine types of CAM. Although fewer NPs practiced in non-metropolitan settings, the percent of NPs in non-metropolitan settings who used CAM was slightly greater than the number in metropolitan settings for six of nine types of CAM. However, no statistically significant relationships were noted using chi-square. Both groups reported the same or similar use of massage therapy/reflexology and Chinese medicine. Results are reported in Table 20.

The relationship between the type of practice setting and use of CAM was also examined. Item 30 asked NPs to indicate the type of practice setting in which they primarily function. The majority reported practicing in an office practice setting either with or without a physician. The practice setting without a physician was further defined as independent or group. Responses from NPs primarily practicing in these three office settings were cross-tabulated with the nine "anyuse" variables, and chi-square was used to determine statistical significance of these relationships.

Table 20

Relationship of NPs' CAM Use and Geographic Practice Setting

	N = 270			
	Practice Setting			
	Metropolitan N = 177		Non-Metropolitan N = 93	
Type of CAM	n	%	n	%
Biofeedback	101	57.1	58	62.4
Chinese medicine	114	64.4	59	63.4
Energy healing	55	31.1	33	35.5
Guided imagery, visualization, meditation, relaxation therapy	127	71.8	68	73.1
Homeopathy	58	32.8	36	38.7
Manipulative therapies	119	67.2	67	72.0
Massage therapy/reflexology	135	76.3	71	76.3
Movement therapy	100	56.5	47	50.5
Naturopathy/nutritional, vitamin, herbal supplements	150	84.7	84	90.3

Note. Frequencies and percents correspond with the practice setting.

As noted in Table 21, NPs practicing with a physician reported a higher percentage (64.6%) of use for biofeedback only when compared with NPs in the other practice settings (47.8% and 52.4%). NPs in an independent practice setting reported the highest percentage of use of CAM for three of the nine types of CAM in this study compared with NPs in other office practices. These included homeopathy (43.5%); movement therapy (65.2%); and naturopathy/nutritional, vitamin, herbal supplements

(87.0%). NPs in group practice settings reported a higher percentage of CAM use for five of the nine types of CAM when compared with their colleagues in other office practice settings. These types of CAM included Chinese medicine; guided imagery, visualization, meditation, and/or relaxation therapy; manipulative therapies; massage therapy and reflexology; and energy healing. However, NPs in group office practice reported a considerably lower percentage (23.8%) of homeopathy use than NPs in independent (43.5%) and physician (33.3%) office practices. None of these relationships were statistically significant.

Metropolitan versus non-metropolitan practice setting and belief about patients' accessibility to CAM was also examined to determine a relationship between practice setting and NPs' beliefs about CAM use for their women patients. Metropolitan and non-metropolitan setting was cross-tabulated with yes responses to the statement in item 5: "CAM is readily accessible/available to your patients." A significantly greater percentage (70.0%, $\underline{n} = 63$) of NPs practicing in non-metropolitan areas as compared to NPs in metropolitan areas (57.1%, $\underline{n} = 97$) reported CAM to be accessible to their women patients [x^2 (1, $\underline{N}$ =260) = 0.041, $\underline{p}$. < .05]. Cross-tabulations were also done on the recoded metropolitan/non-metropolitan variable and item 4, which asked the NPs whether they ever recommended CAM to their patients. Although nonsignificant, slightly more NPs (96.7%, $\underline{n} = 88$) practicing in non-metropolitan settings recommended CAM to their women patients when compared with NPs in metropolitan settings (93.1%, $\underline{n} = 162$).

Table 21

Relationship of NPs' CAM Use to Office Practice Setting

	Office Practice					
	Without Physician				With Physician	
	Independent		Group			
	N =48		N = 21		N =285	
Type of CAM	n	%	n	%	n	%
Biofeedback	11	47.8	11	52.4	93	64.6
Chinese medicine	12	52.2	14	66.7	92	63.9
Energy healing	9	39.1	14	66.7	41	29.2
Guided imagery, visualization, meditation, relaxation therapy	15	65.2	15	71.4	97	67.4
Homeopathy	10	43.5	5	23.8	48	33.3
Manipulative therapies	17	73.9	18	85.7	98	68.1
Massage therapy/reflexology	17	73.9	19	90.5	109	75.7
Movement therapy	15	65.2	12	57.1	12	50.0
Naturopathy/nutritional, vitamin, herbal supplements	20	87.0	24	86.1	25	80.6

Note. Frequencies and percents correspond with the practice setting.

The relationship between NP specialty (item 22) and CAM use (item 17) for women patients was also examined. Only the four NP specialties (i.e., practice and/or education) targeted for this study were included: nurse midwifery, women's health care, family practice, and adult health. Responses from these specialties were cross-tabulated with the "anyuse" variables representing "recommend, refer, and/or provide " for each of the nine types of CAM. Chi-square was used to determine statistically significant

relationships. Compared with the other NP specialty groups for four of the nine types of CAM, a greater percent of NPs educated and/or practicing as nurse midwives used CAM. Overall, certified nurse-midwives (CNMs) had among the greatest percent of CAM use while adult NPs (ANPs) had among the lowest percent of CAM use. The only statistically significant relationship was found for use of Chinese medicine by NPs who were educated and/or practiced in adult health [x^2 (2, $\underline{N}$ =71) = 6.203, $\underline{p} < .05$] (see Table 22).

The second research question that addressed Aim 6 asked, "What is the relationship between NPs' attitudes/beliefs about CAM and NPs' use of CAM for women's health?" Responses to items 2, 4, 5, and 17 were analyzed to address this question. Item 5 addressed 12 statements related to attitudes/beliefs about the use of CAM for women patients, with nine of the statements addressing benefits of CAM use and three addressing negative implications. A dichotomous yes/no response option was provided. The "Yes" responses to these statements were cross-tabulated with the "Yes" responses to item 4 (recommendation of CAM to female patients), and chi-square was used to determine statistical significance. A significant finding was that over 88% of NPs who recommended CAM believed that CAM enhances practice options [x^2 (1, $\underline{N}$ = 256) = 93.358, $\underline{p} < .001$]; that CAM is beneficial/useful [x^2 (1, $\underline{N}$ = 245) = 78.694, $\underline{p} < .001$]; that CAM is within NP scope of practice [x^2 (1, $\underline{N}$ = 242) = 21.631, $\underline{p} < .001$]; that CAM is within his/her personal practice philosophy [x^2 (1, $\underline{N}$ = 245) = 89.323, $\underline{p} < .001$]; and that patients request CAM [x^2 (1, $\underline{N}$ = 237) = 16.093, $\underline{p} < .001$] (see Table 23.)

Table 22

Relationship of NPs' CAM Use to Education/Practice Specialty

	N = 287							
	Specialty							
	Adult health N = 71		Family health N = 112		Nurse midwifery N = 103		Women's health N = 154	
Type of CAM	n	%	n	%	n	%	n	%
Biofeedback	46	64.8	67	59.8	64	62.1	97	63.0
Chinese medicine	44	62.0	57	72.2	105	68.2	68	66.0
Energy healing	21	29.6	34	30.4	58	37.7	40	38.8
Guided imagery, visualization, meditation, relaxation therapy	51	71.8	78	69.6	78	75.7	114	74.0
Homeopathy	21	29.6	37	33.0	53	51.5	59	38.3
Manipulative therapies	48	67.6	90	80.4	79	76.7	107	69.5
Massage therapy/reflexology	50	70.4	90	80.4	85	82.5	123	79.9
Movement therapy	42	59.2)	61	54.5	56	54.4	90	58.4
Naturopathy/nutritional, vitamin, herbal supplements	58	81.7	95	84.8	94	91.3	146	94.8

Note. Frequencies and percents correspond with the practice specialty.

Table 23

Relationship of NPs' Attitudes/Beliefs About CAM to Recommending CAM

Attitudes/Beliefs	Recommendation N = 292 n	%
CAM is within your personal practice philosophy.	248	98.8
CAM is beneficial/useful to patients in your practice.	250	98.4
CAM is reimbursed and/or relatively inexpensive.	54	98.1
CAM enhances your practice options.	263	97.7
CAM referrals and/or practice are encouraged in your practice setting.	111	97.3
CAM is within your scope of practice.	253	96.0
Your patients request CAM.	238	96.0
You feel well-trained/knowledgeable in CAM.	65	95.4
CAM is readily accessible/available to your patients.	169	95.3
You are afraid of jeopardizing your license to practice as a NP if you use CAM in your practice.	229	94.3
You are concerned about untoward interactions of CAM with allopathic Treatment remedies.	68	94.1
You are afraid of personal liability for promoting/supporting CAM use in your practice.	199	94.0

Note. Frequencies and percents correspond with "yes" responses to the attitudes/beliefs statements.

The third research question to address the final aim asked, "What is the relationship between NPs' knowledge of CAM and NPs' use of CAM for women's health?" Responses to the question, "Know basic principles" from item 8 for each of the nine

types of CAM were cross-tabulated with responses to CAM use for each of the corresponding types of CAM from item 17. For each of the nine types of CAM, at least 66% of NPs using a specific type of CAM reported that they knew the basic principles of that type of CAM. For example, over 80% of NPs who recommended, referred, or provided guided imagery, visualization, meditation, and/or relaxation reported that they knew the basic principles of this same type of CAM. The lowest percent was noted for manipulative therapies: 67% of NPs who used manipulative therapies reported being knowledgeable about the basic principles of manipulative therapy. In every case, the association between NPs' knowledge of the basic principles of and use of a specific type of CAM was statistically significant. These findings are reported in Table 24 in order from the highest to the lowest percentage of knowledge associated with CAM use.

The final research question related to Specific Aim 6 asked, "What is the relationship between NPs' communication about CAM and their use of CAM for women's health?" Cross-tabulations were done on responses to item 5 that asked NPs to respond either "Yes" or "No" to 12 positively- or negatively-worded statements about the use of CAM and item 11, which asked who was more likely to bring up CAM in a discussion. The four response options included "You," "Your patient," "Usually both of you," and "Neither of you, CAM is not discussed." These two items were cross-tabulated to determine the relationship between beliefs regarding the use of CAM and communication about CAM with female patients. Chi-square was used to determine significance. Discussion about CAM was initiated most commonly by NPs who believed that CAM enhanced their practice options ($\underline{n} = 56$), was beneficial/useful to their

patients (n = 54), was within their personal practice philosophy (n = 57) and within their scope of practice (n = 56). However, as many NPs or more reported that "patients" or "both" tended to initiate the discussion for these same reasons. Although nonsignificant in total number, NPs who expressed fear of retribution for CAM use by reporting fear of jeopardizing their NP license to practice (n = 9) and fear of personal liability (n = 16) associated with CAM use as well as those who believed CAM was not reimbursed or inexpensive (n = 11) were least likely to initiate a discussion about CAM with their patients (see Table K-1in Appendix K).

Table 24

Relationship of NPs' Knowledge of Basic CAM Principles Used and CAM Use

	Knowledge of CAM		Statistics N = 291	
Type of CAM Used	n	%	x^2	df
Guided imagery, visualization, meditation, relaxation	171	82.6	10.110*	1
Homeopathy	79	79.0	32.673**	1
Biofeedback	136	78.2	8.594*	1
Naturopathy/nutritional, vitamin, herbal supplements	195	77.7	18.792**	1
Massage therapy/reflexology	172	77.1	44.209**	1
Energy healing	68	72.3	29.071**	1
Movement therapy	111	69.8	43.408**	1
Chinese medicine	126	68.5	15.699**	1
Manipulative therapy	136	66.7	9.773*	1

Note. Frequencies and percents correspond with the type of CAM used.

* p < .01. **p < .001.

Items 12 and 17 were cross-tabulated to determine the relationship between NPs' use of CAM and their communication with their women patients about CAM. The statement in item 12 related to communication with patients about their use of CAM "only after allopathic treatment has not been effective" was cross-tabulated with any use of nine types of CAM. As reported in Table 25, NPs who communicated with their patients about CAM only after an allopathic treatment had not been effective were most likely to use naturopathy/nutritional, vitamin, and/or herbal supplements (85.1%) and massage therapy (78.4%) and least likely to use homeopathy (40.4%) and energy healing (29.8%). However, this relationship was statistically significant only for use of naturopathy/nutritional, vitamin, and/or herbal supplements [x^2 (3, N = 291) = 12.833, p < .01]. Table 25 provides these findings in order of CAM use from greatest to least.

Table 25

Relationship of NPs' CAM Use to Communication with Patients After Ineffective Allopathic Treatment

Type of CAM	Communication N = 47 n	%
Naturopathy/nutritional, vitamin, herbal supplements	40	85.1
Massage therapy/reflexology	37	78.7
Guided imagery, visualization, meditation, relaxation therapy	33	70.2
Manipulative therapies	33	70.2
Chinese medicine	29	61.7
Movement therapy	29	61.7
Biofeedback	24	51.1
Homeopathy	19	40.4
Energy healing	14	29.8

Note. Frequencies and percents correspond with communication.

Summary

Over all, the participants in this study had positive attitudes about the use of CAM for women's health and believed that CAM makes positive contributions to health care. While the overwhelming majority believed that it is important to be knowledgeable about CAM, just over half reported having knowledge of the basic principles of all nine types of CAM included in this study. The majority reported using CAM for their women patients by recommending CAM, referring their patients to CAM providers, or providing CAM in their practices. Most were also communicating with their women patients about

CAM. Although the NPs reported using and discussing CAM with their patients, only 24 of the 292 respondents were licensed/certified as CAM providers. The implications of these findings, recommendations for future research, and limitations of this study are addressed in Chapter V.

CHAPTER V

DISCUSSION

Complementary and alternative medicine (CAM) has become a growing phenomenon in the US. Historically, in relation to allopathic health care, CAM has moved from a position of dominance prior to the 1900's, through one of subservience through the 1970s, and to its current situation of gaining a foothold as a partner in health practice. Evidence of the strengthening status of CAM is visible in consumer research (Astin et al., 1998; Bullock et al., 1997; Dunn, 1997; Eisenberg et al., 1998; Eisenberg et al., 1993; Harris, 1987; Landmark Healthcare, 1998; Paramore, 1997).

Use of CAM among American consumers escalated 50% between 1990 and 1997, resulting in one in three users, and $21 billion in estimated expenditures for visits to CAM providers, over half of which has been paid out-of-pocket (Eisenberg et al., 1998). The most likely consumers are women (Dunn, 1997; Eisenberg et al., 1998; Harris, 1987). This is not surprising since CAM is most often used for wellness and symptom management of chronic, non-life-threatening illnesses (Astin et al., 1998; Bullock et al., 1997; Dunn, 1997; Eisenberg et al., 1998; Eisenberg et al., 1993; Harris, 1987; Landmark Healthcare, 1998; Paramore, 1997), and many chronic health conditions, conducive to CAM practices, are specific to or experienced with greater prevalence by women (Burg, 1996; Dimond, 1995; Kinsella, 1992). Furthermore, CAM is a conceptual fit with women's health because personal responsibility for health, patient/provider partnerships in health management, and self-care practices are all important aspects of both CAM and

women's health care (Burg, 1996; Bushy, 1992; McElmurry & Huddleston, 1991; Webster et al., 1986).

Knowledge of the prevalence of consumer use of CAM has resulted in related research on allopathic health-care providers' use of CAM. However, research on allopathic providers' use of CAM in the US has been conducted primarily with physicians (Berman et al., 1995; Blumberg et al., 1995; Borkan et al., 1994; Boucher & Lenz, 1998) with the exception of one study that included 742 physicians and 39 nurse practitioners (NPs) (Gordon et al., 1998). This physician-focus is surprising since NPs are a rapidly growing group of primary care providers (Cooper et al., 1998) who may be likely to use CAM in their practices because nursing philosophy is congruent with the concepts of holistic care. An interesting outcome of the study by Gordon et al. was that obstetrics-gynecology physicians and NPs (both of whom provided health care exclusively to women) were significantly more likely than adult primary care physicians (who provided health care to men and women) to use CAM. This may be due to a greater acceptance of CAM by women for their health-care needs. However, despite the consistent finding that women are more likely to use CAM, researchers have not focused on allopathic providers' use of CAM for women's health.

The present study was designed to address gaps in existing research related to NP use of CAM for women's health. Four domains, identified from a review of the literature on allopathic provider use of CAM and a qualitative study conducted in the initial phase of survey tool development for this research, were used as a framework to develop the specific aims, research questions, and survey items. These domains included use,

attitudes/beliefs, knowledge, and communication. The purpose of the study was to examine NPs' attitudes/beliefs and communication about and their knowledge and use of CAM for women's health. The six specific aims were to describe (a) CAM use by NPs for women's health; (b) NPs' attitudes/beliefs regarding the use of CAM for women's health; (c) NPs' knowledge of CAM and CAM providers; (d) NPs' training in specific types of CAM; (e) NPs' communication about CAM and the importance of knowing whether their women patients use CAM; and (f) factors associated with the use or nonuse of CAM by NPs for women's health. Survey data were obtained to answer research questions specific to each of these aims.

The findings of this study, presented in the Chapter 4, are summarized and discussed in this chapter. Relationships between demographics and the domains of NP use, attitudes/beliefs, knowledge, communication about CAM are discussed within the relevant domains rather than separately as in earlier chapters. In addition, qualitative data from the survey have been incorporated into the discussion to provide additional detail not captured in the predominantly forced-choice response format. Implications of the findings and recommendations for future research are also discussed in relation to nursing practice, education, research, and policy. Finally, limitations of this study are noted.

Summary

Methods

A descriptive correlational survey design was used to answer the research questions. Because no prior related research had been conducted with NPs on their use of CAM for women's health, a 32-item survey tool was designed specifically for this study.

Existing surveys of allopathic providers on their use of CAM, data from a qualitative study, feedback from a panel of NPs with expertise in either CAM or women's health, and survey development literature were all used to develop the survey. The survey ultimately included 9 types of CAM and 16 health conditions specific to women (see Appendix E). The final questionnaire was mailed to 582 NPs licensed in Oregon who were currently practicing and who were most likely to provide health care to women (age 18 and older). A 60.7% (N = 292) response rate was attained, which may indicate that NPs in Oregon have a strong interest in the use of CAM for their women patients.

Sample Profile

Demographic characteristics of the sample were comparable to the age, employment status, and practice setting of NP currently licensed and practicing in Oregon. On average, respondents were 47 years old and had practiced for 11 years. The majority practiced full-time in non-managed-care office settings with physicians and within a 60-mile radius of Portland. Most respondents worked with physicians in an office-practice setting. Congruent with the focus of this research, the majority were educated and/or practiced in women's health care, family health, nurse midwifery, and/or adult health with the majority (69.7%) of their patient populations comprised of women. Twenty-four of the 292 respondents reported additional licensure/certification as CAM providers.

NPs' use of CAM with their women patients was measured in terms of CAM being recommended to patients, patients being referred to CAM providers, and NPs providing CAM to patients. Within this definition of CAM use, the demographic profile

of the respondent most likely to use CAM was 43-51 year-old NP who practiced in a group office setting without a physician and who had been a NP for less than 21 years. This would imply that NPs who had established practices and were working with a variety of non-physician providers, perhaps even CAM practitioners, were more likely to use CAM.

Demographics and Use of CAM

Practice Setting

Several respondents stated that their practice settings dictated their use of CAM. For example, some indicated that a family practice setting offered more options for CAM use than an emergency room or acute care setting. This finding is congruent with the reasons why health-care consumers are most likely to use CAM: for chronic, non-life-threatening illnesses. Furthermore, general practitioners have been shown to be more likely to recommend CAM and refer their patients to CAM providers than hospital physicians (Perkin et al., 1994).

Despite previous research that supports the use of CAM by physicians (Berman et al., 1995; Blumberg et al., 1995; Borkan et al., 1994; Boucher & Lenz, 1998; Gordon et al., 1998; Verhoef & Sutherland, 1995), NPs working in group office practices without a physician, compared to NPs in independent practices or practices with physicians, were more likely to use five of the nine types of CAM included in this study. These were: Chinese medicine; energy healing; guided imagery, visualization, meditation, and/or relaxation; manipulative therapies; and massage therapy and/or reflexology. Greater use of CAM in a group practice may be attributed to a broader composition of providers,

providers that may include acupuncturists, hypnotherapists, chiropractors, and massage therapists.

Several respondents commented on the impact that working with physicians had on their use of CAM. One NP wrote:

> CAM therapy is generally 'tolerated' by [physicians] I work with but it is not supported or encouraged by all of them, who would like to see major studies done before recommending and [who would like] to read it clearly in their New England Journals of Medicine.

Another NP commented on the surreptitious use of CAM that resulted from working in a physician-based or allopathic group practice setting:

> The milieu and acceptance of the physician or group whom I practice with determine how much CAM is sanctioned. If sanctioned, it can be charted. If not, suggestions, hints, and comments are made. In the last few years it has been more generally accepted, but several of the physicians I worked with didn't think it was scientific enough. Since they were officially supervising my practice, or owned the practice, my use of CAM was limited.

Despite the reports of limited use of CAM in physician-based practices, NPs who worked with physicians were more likely to use biofeedback than their peers in an independent or non-physician-based group office setting. It is likely that physicians may be more accepting of biofeedback because it is one of the more researched and reimbursed types of CAM. Furthermore, physicians have reported training in the use of biofeedback (Berman et al., 1995).

Although differences in allopathic providers' use of CAM based on regions of the country have been studied (Astin et al., 1998), previous research has not been conducted to address differences based on population-based practice settings. Differences in CAM use between metropolitan and non-metropolitan practice settings were examined in this

study. The majority of respondents reported using CAM for their women patients, and the prevalence of CAM use was similar for NPs working in either setting. However, NPs practicing in non-metropolitan areas were somewhat more likely to use six of the nine types of CAM included in this study, specifically: biofeedback; energy healing; guided imagery, visualization, meditation, and/or relaxation therapy; homeopathy; manipulative therapies; and naturopathy and/or nutritional, vitamin, and/or herbal supplements. Traditional Chinese medicine and movement therapies were used to a greater extent by NPs who practiced in metropolitan areas. Use of massage therapy and/or reflexology was the same in both settings.

Although consumer research on the use of CAM has not typically addressed metropolitan and non-metropolitan differences, Dunn (1997) studied rural Americans and reported the greatest prevalence in use there was for manipulative therapy, massage, relaxation, and herbal medicine. The similarities between this study and Dunn's research may have occurred because consumers in non-metropolitan areas are more likely to accept these types of CAM practices because of their availability and/or self-care approach.

Personal Provider Preference

A final demographic characteristic of respondents was that the majority routinely used allopathic providers for their own health-care needs. However, the health issue for which treatment was being sought and reimbursement for the treatment also influenced the respondents' choice of provider. Overall, respondents' provider preferences for their own health-care needs did not influence their decisions to recommend CAM to their

women patients; an equal percent who reported using and never using CAM providers for themselves recommended CAM to their own patients.

Use of CAM

As noted previously, the majority of NPs reported using CAM for their women patients. Of the nine types of CAM included in this study, naturopathy/nutritional, vitamin, and/or herbal supplements were consistently the most common type of CAM recommended, referred for, and/or provided by NPs. Respondents reported using these modalities most often for 12 of 16 women's health conditions included in the survey, and they were among the top three types of CAM used for the remaining health conditions with the exception of chronic pain (see Appendix J). The prevalence in use of naturopathy/supplements is not surprising since NPs also reported being influenced by patients' requests for CAM, and CAM supplements are perhaps the most widely marketed CAM modalities in lay books, print, and visual media because they often involve self-treatment. The notion of self-care is known to be well-accepted by women (Bushy, 1992; McElmurry & Huddleston, 1991).

Guided imagery, visualization, meditation, and/or relaxation were the next most commonly used modalities for 11 of the 16 conditions. Respondents were most likely to use a variety of CAM for chronic pain, musculoskeletal/joint problems, and headaches and migraines. These health conditions are similar to those reported in previous allopathic provider research on reasons for CAM use (Astin et al., 1998). Regardless of age or practice setting, the overwhelming majority of NPs had recommended CAM and

had referred their patients to CAM providers. Only 11 of 292 respondents had never used CAM for their women patients.

Of the 281 NPs who reported using CAM for women's health, 24 identified themselves as CAM providers for 8 of 9 types of CAM included in the survey. The exception was Chinese medicine; no one reported being a licensed Traditional Chinese medicine (TCM) practitioner. Nearly one-third reported licensure/certification in energy healing. Although energy healing was among the most common type of CAM provided to patients by NPs, it was the least often recommended and referred among the nine types of CAM included in this study. Furthermore, the most negative comments made about any particular type of CAM were specific to energy healing. One NP wrote, "I believe that energy healing modalities are bogus…I actually discourage patients from using [them]."

Referral to CAM providers was most often based on the congruence of CAM with patients' beliefs systems, the NP's own treatment plan, and/or patient requests. These findings were similar to those reported by certified nurse-midwives (CNMs) in North Carolina (Allaire et al., 2000) as well as physicians (Borkan et al., 1994; Verhoef & Sutherland, 1995). One NP commented on the reasons for referring patients for CAM, stating, "For chronic pain, I'll be more liberal in referring, mostly to avoid chronic use of pain medications." Referrals received from CAM providers or NPs' licensure/certification as CAM providers were not a factor in deciding to refer to CAM providers.

Attitudes/Beliefs About CAM

Formal and Informal Validation/Evidence

Overall, respondents placed significantly more importance on formal and informal validation for use of allopathic treatments than with CAM treatments. Formal methods included scientific basis, clinical trials, laboratory evidence, and theoretical basis. Informal methods of greater importance for allopathic treatments were supporting literature, prevailing standard of care, and recommendations and experiences of colleagues. Respondents relied on informal methods such as patients' recommendations and personal, family, and/or patients' experiences to validate CAM prior to its use.

The majority of NPs were using CAM for their women patients despite the finding that they placed less importance on formal validation/evidence for its use as they did for allopathic treatments. One respondent commented, "It is not so important to me that I rationally understand how everything works in healing…I like to understand but it is not necessary." Others provided examples of personal, family, and patients' experiences with CAM and the importance of these experiences on their subsequent use or nonuse of CAM. One stated, "I have seen the power of mind over matter…thus I believe in biofeedback." However, NPs offered divergent opinions about the importance of validating CAM for use in practice. Some placed a considerable degree of importance on the scientific efficacy of CAM, hesitating to recommend therapies without proven efficacy "just because they are currently popular" among colleagues. The importance placed on validation/evidence for CAM use was especially evident in a comment by one NP who wrote, "If efficacy can be established for barking at the moon, I would embrace

it as a therapy." Another NP remarked, "CAM is a can of worms. I believe that it has its place, but as a whole I strongly feel that NPs should be cautious...do no harm [and] rely on good studies to guide practice." However, several NPs commented that with proof of efficacy through formal evidence (e.g., scientific basis and double blind trials), they would be more likely to recommend CAM more often in their practice. The need to feel assured of a treatment's safety was evident in this comment, "I would be interested in providing more CAM in my practice if I thought the health practice was researched, safe, and effective."

The importance of formal methods of validation of CAM prior to recommending its use was similar for NPs who did and did not recommend CAM to their women patients whereas informal methods were more important to NPs who recommended CAM. Before using CAM, respondents seemed more comfortable relying on outcomes based on experiences and recommendations rather than on scientific methods of evaluation, unlike their expectations for allopathic treatment use. Reliance on word-of-mouth methods for CAM makes sense since respondents believed that CAM can make positive contributions to health care when there is more evidence to assure its safety and efficaciousness.

Advantages/Disadvantages of CAM

Regardless of respondents' views on the importance of formal or informal methods of validation or evidence for the use of CAM, their beliefs about the advantages of CAM were overwhelmingly positive. One NP wrote, "I believe that CAM is the wave of the future." Over three-fourths agreed with the statements that CAM can improve

quality of life; provide patients with hope and a useful alternative when allopathic remedies have failed; empower patients to be responsible for their own health; and offer treatment options with fewer uncomfortable side effects. Respondents also overwhelming believed that the use of CAM was beneficial and enhanced practice options. One NP wrote, "I have found there is NO WAY to provide comprehensive care to my patients without incorporating CAM in my practice." Another stated, "This is a personal quest, reconciling the different practice philosophies and techniques of the various and systematic approaches to health care and combining the valuable aspects of each." Furthermore, the majority reported that patients were requesting CAM, a finding supported by existing research (Borkan et al, 1994). One NP expressed the impact of patients' treatment preferences by stating, "Patients demand to use CAM first."

Scope of Practice and CAM

The majority of NPs believed that the use of CAM was within their scope of practice and commented on their integration of CAM with their allopathic practices. One stated, "I'm really delighted to be able to choose and/or provide either allopathic or CAM, or both, depending on need, appropriateness, extremity of illness, patient style, or cultural comfort level." Another stated, "Offering CAM and 'blended health care' is clearly why many patients seek me out." However, several respondents questioned whether CAM was within their ability to practice as NPs and related concerns that influenced their decisions to use CAM. One stated, "My CAM use is limited by my concern about how its use may affect my allopathic licensing." Another stated, "I would

personally be comfortable recommending or providing CAM more frequently, but my understanding is that it is outside the NP scope of practice."

Although a number of NPs commented on scope-of-practice issues with regard to CAM use in practice, respondents did not necessarily want the practice of CAM to be regulated because regulation would limit alternative treatment options for their patients. One NP wrote, "I am opposed to government control that inhibits choice." However, NPs in this study also expressed fear of jeopardizing their license and fear of practice liability with regard to CAM use with their patients. Nonetheless, the majority of NPs reported using CAM even when their work environments were not supportive of its use. NPs appeared to be placed in situations where they weighed the benefits of CAM for their patients with the negative implications for their patients and their license to practice. It seems that the benefits outweighed the negative implications, or at least NPs in this study were willing to risk the imbalance.

To "skirt" the scope-of practice issue, some NPs reported providing patients with literature so they could "choose" their own therapies rather than "recommending" them. Again, this was another example of CAM being practiced in a clandestine way by NPs out of fear of retribution. One example provided concerned a NP who had been warned about the use of CAM by the Oregon State Board of Nursing (OSBN) for practicing "outside of the scope of NP practice." Although the nature of this particular NP's use of CAM was not related/disclosed there may be valid concerns regarding CAM use and NPs' scope of practice. Interestingly, scope-of-practice issues have not been addressed in studies of physicians' use of CAM.

Benefits of CAM Use

Several NPs commented on the benefits of CAM approaches to their personal health and the health of their families and patients. They commented that CAM encourages "lifestyle changes instead of simply throwing another pill at a problem," offers "down-to-earth and less expensive interventions," and more "natural" treatment modalities. Some NPs considered CAM to be more useful than allopathic treatment for chronic illnesses and illnesses related to the immune system. As one NP stated, "Health care in the US shines in acute illnesses (life-threatening) and surgical care; [however] we have only chemical system-oriented solutions to chronic ill health."

Respondents also cited limitations of using allopathic modalities to treat specific women's health problems such as breast cancer, fibromyalsia, and menopausal symptoms because of the few options available for these problems and the focus on symptom management rather than the underlying disorder. One NP stated, "I often feel I believe in CAM more than allopathic medicine."

The overwhelming majority of the respondents believed that "CAM can make positive contributions to health care when there is more evidence to assure its safety and efficaciousness." This acknowledgment of the current lack of "evidence" to support CAM fits with the importance these NPs placed on informal methods of validation or evidence before using CAM. Only 3 of 287 NPs reported that they did not believe CAM makes a positive contribution to health care. Over all, fewer than half believed "CAM can cure disease." Based on this finding, it appears that most used CAM for wellness or symptom management rather than for curative purposes.

Concerns About CAM Use

Although respondents regarded CAM as useful and beneficial, the majority also agreed that CAM could have a negative impact on health care by endangering patients. Comments about specific issues related to the safety of CAM use with women were noted; several expressed concerns about the lack of standardization of herbal products. One NP also certified as a herbalist wrote:

> The lack of regulation of the herbal industry also makes it difficult to recommend [herbs] since the content/percentage of herbal preparations is not guaranteed—so, outcomes are difficult to predict in your patients, meaning did the therapy work or was there not enough of the stated herb in the purchased product to be beneficial.

Other NPs also expressed concerns about product safety stating, "many patients use supplements purchased at health food stores" and "there is not enough documentation of the benefits of some CAM and especially not enough documentation of the safety versus the risks of some herbal treatments." These concerns extended to patients' use of CAM for self-treatment:

> Many of my clients cannot afford allopathic diagnostic or surgical procedures that might help diagnose their health problems and will seek CAM as an alternative---but usually NOT through a certified provider. They will seek herbal over-the-counter remedies or advice of friends or store employees. I cannot count the number of times I've heard "Aren't store employees experts?"!!

Three-fourths of the respondents were concerned about the potential harmful effects of CAM interactions with other treatments. One NP wrote, "I have a number of patients taking a large number of over-the-counter supplements—all with interactions." The fact that the majority of respondents expressed concerns about the use of CAM for a variety of reasons is an indication that they were cognizant of the need to be aware of and

knowledgeable about the types of CAM being used by patients and recommended for patients' use.

Over half of the respondents acknowledged that CAM has the potential to offer less expensive treatment options to women. However, over three-fourths recognized that CAM could increase health care costs to patients when not reimbursed. Many stated that CAM was inaccessible to the poor, under-served populations they cared for because of the expense associated with its use. One NP wrote, "I work with very poor populations who do not have the access or the financial resources to explore [CAM]."

Although respondents recognized the disadvantages as well as the advantages of CAM use, the overwhelming majority recommended CAM to their women patients. This suggests that NPs were willing to overlook potential disadvantages, including those related to their own scope of practice, to incorporate CAM in their practices. Because they acknowledged the potential expense to their patients associated with CAM use, they may have incorporated CAM modalities that fit with their patients' financial capabilities.

Knowledge of CAM

Interest in CAM

One NP who worked with patients with chronic degenerative diseases stated, "I feel it's my obligation to learn as much as possible [about CAM]." This sentiment was echoed among all respondents, regardless of their practice settings. The majority believed it was important to be knowledgeable about CAM for women's health. They were most interested in learning more about Chinese medicine and naturopathy/ nutritional, vitamin, and/or herbal supplements, and least interested in learning more

about manipulative therapies and massage therapy/reflexology. Some NPs commented that their interest in learning more about CAM has peaked due to the success of CAM use for their own health and the health of family members and patients.

Basic Knowledge of CAM

The degree of interest in learning more was not related to lack of basic knowledge of any of these types of CAM since over half reported knowing the basic principles of all nine types of CAM included in this survey. Three-fourths or more reported knowing the basic principles of guided imagery, visualization, meditation, and/or relaxation therapy; naturopathy/nutritional, vitamin, and/or herbal supplements; and biofeedback. Furthermore, more than two-thirds reported being knowledgeable about the basic principles for the types of CAM they used. This suggests that NPs have been educating themselves about the types of CAM they used for their patients.

Knowledge of CAM Providers and Practice Requirements

Despite a high percent of self-reported knowledge of the basic principles of CAM, less than one-fifth of respondents acknowledged knowing Oregon practice requirements for any of the nine types of CAM listed. Over one-third knew providers they could refer to for the nine types of CAM. The most knowledge of CAM providers was reported for manipulative therapies, massage therapy and/or reflexology, and Chinese medicine. This finding may be unique to Oregon because of the states' six accredited, academic institutions for practitioners of these therapies.

Interestingly, a greater percent of NPs practicing in non-metropolitan areas knew CAM providers to refer to for all of the types of CAM with the exception of Chinese

medicine and naturopathy/nutritional, vitamin, and/or herbal supplements. This may be a reflection of the location and availability of these types of providers compared with providers of manipulative therapies (e.g., chiropractors), who are often the only health-care providers in some rural communities. This assumption could not be confirmed because information on CAM providers' practice locations in the state was not available from their state boards or professional organizations. However, several NPs cited the impact of provider availability on their referral practices. A NP in a metropolitan-based practice wrote, "I am friends with many CAM providers in the area and we refer to each other as needed." In contrast, a NP in a non-metropolitan practice location wrote, "Due to my location of practice, it is difficult to find CAM providers. My patients must be willing to drive 130 miles which many aren't."

Methods for Obtaining CAM Knowledge

Although NPs in both metropolitan and non-metropolitan practice settings used the same methods for obtaining information about CAM, NPs in non-metropolitan areas relied more on allopathic professional journals, family, and friends. CAM providers and professional organizations were the methods more commonly used by NPs in metropolitan settings. Ironically, the methods least used by NPs to obtain information about CAM, regardless of their practice setting, pertained to their own training in nursing. Overall, less than one-fifth had received CAM information in their undergraduate education and less than half had received it in their NP training. One NP stated, "I always wish my [certified nurse-midwifery] program had included CAM—I assumed it would before I got there and found it to be a very medical model!" Another

acknowledged this lapse in nursing education, stating, "I would like to see CAM education introduced into the NP curriculum as it is being introduced in medical programs." Participants were not asked where they had received their undergraduate or NP education, and this information was not available through the OSBN.

Impact of Knowledge on Recommendation of CAM

Although most NPs reported having knowledge of CAM, some commented on their lack of knowledge and how that has limited their recommendations of CAM to patients. One respondent wrote, "I don't feel qualified to even recommend CAM to my patients." This was echoed by another NP, "I don't know enough about CAM so I don't recommend treatments I have no understanding of." Similar to previous research with allopathic providers (Berman et al., 1995), this lack of knowledge was not necessarily associated with lack of desire for additional training. One NP wrote, "The reason I don't recommend CAM is that I do not have education in it, and poor literature is available. Short of taking a full 3-5-year r training, it is difficult to get good education in CAM."

Impact of Knowledge on Referral for CAM

Respondents reported that their lack of CAM knowledge not only influenced their recommendation for CAM use, but it also influenced their decision to refer to CAM providers. When respondents didn't have knowledge of the basic principles of CAM modalities, they were less likely to refer to providers for that same type of CAM. One NP stated, "I don't feel comfortable referring clients to providers [when] I don't know the background and scientific basis of their practice, but I think there should be that option, especially when allopathic medicine doesn't solve the problem." Respondents appeared

to be recommending and referring for those types of CAM they felt most knowledgeable about. This implies that they made informed decisions about CAM and did not incorporate CAM modalities based solely on patient requests.

Training in CAM

Formal Education

Most of the NPs surveyed had not received formal CAM education. Of those who had, the most common education was in guided imagery, visualization, meditation, and/or relaxation and naturopathy/nutritional, vitamin, and/or herbal supplements. It was interesting to note that these two types of CAM were also the types that the fewest NPs knew providers to refer to. Furthermore, naturopathy was clustered with the use of supplements. Perhaps NPs who had received formal education in these types of CAM provided them in their own practices and were less likely to refer for these CAM therapies.

NPs who were educated in different specialties reported receiving formal CAM education to different levels. Certified nurse-midwives (CNMs) in this study were most likely to have CAM included in their NP education (50%). This was more than the number reported by the sample over all (43%) and more than the 33% reported by the 120 CNMs in the study by Allaire et al. (2000).

Certification/Licensure in CAM

When asked to describe their own knowledge of CAM beyond formal education, a total of 24 respondents identified themselves as licensed/certified CAM providers. However, only seven indicated they were CAM providers in a separate question related to

demographics at the end of the survey. The discrepancy may be due to the way in which the questions were phrased or their placement in the survey. The 24 NPs who reported licensure/certification as CAM providers did so in a question specific to their knowledge of each of the nine types of CAM listed. Several NPs reported an interest in obtaining licensure/certification in CAM in the future; however they also recognized the overwhelming amount of knowledge needed to be both an allopathic and CAM provider. One NP stated, "Although I have been certified as an herbalist, there are so many uses for each herb that keeping abreast of alternative and conventional medicine is very difficult."

An interesting finding was that 2 of the 24 respondents who reported licensure/certification in CAM interpreted the definition of "CAM provider" differently than intended in this study. These two respondents considered their advanced practice license qualified them as CAM providers and acknowledged integrating CAM into their practices, stating:

> I am licensed as a NP and advertise that I provide [CAM]. I am able to do this if I have documentation of training. So I believe my NP license is an acceptable mechanism for CAM since I have taken many classes and teach classes in CAM.

Another wrote:

> Midwives have always provided women with an alternative type of health care. This is within their "midwifery model of care." Midwifery, in itself, incorporates many types of [CAM], such as herbs, vitamins, nutrition, exercise, massage, and hydrotherapy.

Although NPs' use of CAM was similar across specialties, CNMs were the most likely to use all types of CAM and were far more likely to use homeopathy, one of the least used types over all. The reported prevalence in CAM use among CNMs is logical if we consider the comment made about CAM being an integral part of nurse midwifery.

This statement was also supported in the study by Allaire et al. (2000) in which three-fourths of the CNMs had used ten different types of CAM, including homeopathy, for pregnant and post-partum patients

Communication About CAM

Provider/Patient Communication

The overwhelming majority (83%) agreed it was important to communicate with their women patients about CAM annually or at every new patient visit. One made it a habit to integrate a discussion about CAM into annual exams as part of health promotion recommendations. Another encouraged patients to research natural remedies they were interested in using and then followed up at a subsequent visit. As one NP wrote, "I find most women open to alternative health care options."

Over all, CAM was discussed with patients by over three-fourths of the respondents and was most often brought up mutually (50%) or by the patients (26%). However, not all were as eager to initiate discussions about CAM. Despite reporting that it was important to know whether their patients used CAM, less than 20% reported initiating a discussion of CAM on their own. For the small percentage of NPs who did not communicate with their patients about CAM, certain situations may not have been appropriate to discuss CAM as an option (e.g., acute illnesses or life-threatening conditions).

The initiation of discussions with patients about CAM by NPs was based on their beliefs about the effect of the CAM use on both the patient and themselves. Not surprisingly, NPs who recognized the benefits of CAM and believed CAM to be within

their practice philosophies and scope of practice were more likely to initiate discussions with patients on their own or mutually with the patient. Conversely, NPs who were more fearful of the negative implications of CAM, such as the impact of CAM use on their license to practice or personal liability or the high cost of CAM for patients, were least likely to bring up the subject with their patients. Respondents also cited patients' belief systems as important factors that influenced their decisions to communicate with their patients about CAM.

NPs reported they were most likely to discuss naturopathy and/or nutritional, vitamin, and/or herbal treatments and massage therapy and/or reflexology than other types of CAM in situations after allopathic treatment had failed. Energy healing and homeopathy were the least likely types of CAM to be discussed under this circumstance. These findings make sense as these are consistently—and respectively—the most likely and least likely types of CAM used by respondents. This suggests that NPs were not turning to CAM modalities that they were least knowledgeable about for the sake of providing the patient with treatment options when other methods had failed; rather, they were discussing types of CAM they were most knowledgeable about and used most often as treatment options.

Provider/Provider Communication

Although the majority of respondents communicated about CAM with their patients, they did not communicate to the same degree with the CAM providers to whom they had referred patients. Less than half who had referred to CAM providers followed up using written and/or oral communication. One reason for lack of follow-up was noted

by several NPs who stated that typically the provider who has been referred to is responsible for following up with the referring provider. These same NPs reported that their follow-up procedures were no different for allopathic or CAM providers.

Implications and Recommendations

Findings from this study have implications for nursing education, practice, policy, and research. Both implications and recommendations for future research in these areas are discussed here.

Education

Nursing training programs are intended to provide the education and skills necessary to prepare licensed nurses to practice safe, efficacious health care for their patients. A number of key nursing organizations are responsible for issuing position statements, curriculum guidelines, and generic recommendations for core content and competencies for undergraduate and advanced practice nursing programs. These organizations include the American Academy of Nurse Practitioners, the American Association of Colleges of Nursing (AACN), the American College of Nurse Midwives, the American Nurses Association (ANA), and the National Organization of Nurse Practitioner Faculties (NONPF). Although these nursing organizations have made statements and recommendations regarding the need to expand the availability and accessibility of health care, especially to underserved populations with sensitivity and respect for diversity, none of their statements are specific to CAM. This is surprising since CAM use is known to be increasingly prevalent among health-care consumers. CAM use was also prevalent among the majority of NPs in this study although

undergraduate nursing training and NP training were among the least common methods used to obtain information about CAM. These findings have significant implications for nursing education. It would be important to collect data on nursing programs throughout the US to determine which programs are incorporating CAM into their curriculum and how this is being done. Knowledge of CAM education that was successfully integrated into nursing programs could be used as a template for curriculum development in other nursing programs. Pepa and Russell (2000) have published their efforts to introduce CAM strategies into nursing baccalaureate curriculum. Ironically, the medical profession, regarded to be less holistic than nursing, has already included CAM in 64% of 125 medical schools surveyed (Wetzel, Eisenberg & Kaptchuk, 1998).

Although three-fourths of the NPs in this study reported having knowledge of the basic principles of the types of CAM they used, the implications for using CAM in practice without this knowledge have implications with regard to patients' safety. This is another reason why it would be important to examine undergraduate and advanced practice nursing curriculum to assess the current status of CAM education in these programs. The inclusion of CAM in nursing education would provide nurses with a foundation in CAM and a basis for communicating with their patients about CAM use, an important issue since a reported one in three Americans is using CAM (Eisenberg et al, 1998).

The majority of NPs in this study believed it was important to be knowledgeable about CAM for women's health and were interested in learning more about CAM. However, many expressed frustration with trying to keep abreast of CAM and allopathic

treatments while working long hours in their current practices. An important contribution for NPs already in practice would be to examine a variety of resources for continuing education in CAM and/or resources for obtaining information about CAM and CAM providers. Several NPs reported using journal clubs and study groups to learn more about CAM. Research on these learning approaches could be expanded to examine their potential on the Internet through the use of chat rooms and journal clubs. Many on-line resources are currently available for health-care consumers and providers (Moss, 1997) although the information available is not always based on sound science. NPs would need to be provided with accurate, reliable resources to provide their patients with sound advice about CAM.

NPs who worked in non-metropolitan settings were less likely than NPs in metropolitan settings to obtain information about CAM from CAM providers. This is likely due to inaccessibility of CAM providers in smaller communities. However, technological advances have improved information access for health-care providers who work in remote communities. Future research could be conducted with NPs in non-metropolitan areas to explore the use of telecommunication with CAM providers as a means of accessing information about CAM modalities and CAM providers for referral.

Practice

Previous research on allopathic providers' use of CAM has not been conducted to address scope-of-practice issues. However, a key finding of the present study pertained to NPs' scope of practice with regard to the use of CAM. Over 90% of NPs surveyed responded affirmatively to a direct question about the use of CAM being within their

scope of practice. But some of the same NPs also expressed fears of jeopardizing their license to practice and personal liability as a result of CAM use. These issues were a real concern to these NPs because their use of CAM and communication with patients about CAM were influenced by their individual interpretations of CAM use within their scope of practice.

The current definition of NPs' scope of practice in Oregon does not provide a clear understanding of their rights to practice CAM. It is likely that the confusion and frustration relayed by respondents in this study are also experienced by NPs in other states. However, the independent practice autonomy of the study's NPs coupled with the number and type of CAM training institutions in the state are unique to Oregon and may have implications for NPs' use of CAM in this study. It is likely that NPs in Oregon are influenced by the availability of CAM and CAM providers in the state and thus might refer for and/or incorporate these modalities into their own practices in greater number. Therefore, replication of this study with NPs in other states should be conducted to examine the use of CAM in states where NPs' scope of practice may be more restrictive and the number and type of CAM training institutions differ from Oregon's.

The focus of this study was on the use of CAM by NPs who, as primary care providers, may or may not have also been licensed/certified in CAM. It would be useful to study nurses who do not have advanced practice training as NPs but who are licensed and/or certified CAM providers. These nurses may be functioning independently in primary practices without NP licensure by virtue of being CAM practitioners. Research could be conducted to examine how their CAM provider status is being integrated into

their nursing practice. These data might illustrate how CAM has expanded their nursing role.

NPs who worked in group practices without physicians reported using CAM to a greater extent than NPs who worked in physician-based practices. As previously noted, this may be due to the inclusion of CAM providers within the practice and the caution some NPs felt with physicians in their practices. Future research on NPs who use CAM in group practice settings could provide insight into the type of environments that are conducive to the use of CAM. This would include an evaluation of the types of providers working within the practice and the NPs' role as a member of the group.

Policy

The overwhelming majority of NPs in this study reported incorporating CAM into their allopathic practices, despite their questions and concerns about use of CAM within the NP scope of practice. This finding emphasizes a need to provide NPs with clear guidelines for CAM use. The function of the Oregon State Board of Nursing (OSBN) is to protect the public in matters concerning nursing practice and to provide parameters for the legal scope of practice for licensed nurses. Currently, the OSBN has a task force of NPs who are dually licensed as CAM providers examining this issue. Although the intent of the group is not to regulate NPs' use of CAM, it hopes to develop guidelines for practice. These guidelines would provide NPs with answers to questions related to liability, scope of practice, and concerns about interactions between allopathic and CAM treatment modalities. Additional information could be obtained through a qualitative study with NPs throughout the state to address their concerns and questions about the use

of CAM in their practices. The qualitative study could be replicated in other states as well to facilitate understanding of NPs' use of and concerns regarding CAM in relation to their specific state practice acts.

Although the OSBN is in the process of addressing NPs' use of CAM in practice, currently the board has only one position statement related to CAM (OAR 851-50-005). The statement pertains to the state's recognition of CNMs but not "direct entry midwives." It would be useful to examine the efforts being made in other states regarding the use of CAM in nursing practice, including relevant policies and guidelines for baccalaureate-prepared and advanced practice nurses. A review of each state's policies and guidelines specific to CAM would provide useful information for practicing nurses, nurse educators, administrators, and nursing policy makers. This would be especially valuable since baccalaureate-prepared and advanced practice nurses (e.g., nurse anesthetists, midwives, and NPs) have been meeting with the National Council of the State Boards of Nursing (NCSBN) to address multi-state, uniform practice requirements (Romig, 1998). Recognition of the use of CAM in nursing practice by state nursing boards would certainly have implications for the proposed mutual practice act.

Research

Future research on NPs' use of CAM is essential since this is the only known study conducted to focus specifically on NPs' use of CAM. Because the study sample was most likely comprised of Caucasian women, it would be beneficial to conduct similar research on the use of CAM by NPs of various ethnic backgrounds. NPs' ethnicity might well influence their use of culturally-based health-care practices.

Because the focus of this study was on NPs, age and ethnic diversity of their patient populations were also not directly addressed in the survey questions. However, several respondents discussed the impact of these factors on their decisions to use CAM. One NP who worked with older adults in an elder-care facility wrote, "My patients are in their seventies and eighties. Most have dementia to the degree that they and their family members would not agree to participate in CAM." Comments related to caring for ethnically diverse patient populations were polarized. Some reported using CAM extensively with specific ethnic populations out of respect for their cultural beliefs and practices, while others did not use CAM with specific ethnic groups because they didn't think their patients would be interested or would understand CAM as it is practiced in the US. One NP wrote, "My ethnically diverse patient population does not have the desire to use CAM or CAM providers." Another referred to his/her Vietnamese and Russian patients stating, "The nature of the non-native patient population in my practice is not very culturally adapted to CAM as it is practiced in our society." However, this NP did not elaborate on whether the "non-native" patients were "culturally –adapted" to allopathic (Western) medicine practices either. Furthermore, it was not clear if the NP's stated beliefs were based on discussions about CAM with patients or were merely assumptions; several other NPs stated that they worked with ethnically diverse populations that "embraced CAM as the norm" and were "very open to the use of CAM."

Because NPs commonly provide health care to disadvantaged populations, such as low-income older adults and ethnic minorities, it would be beneficial to examine NPs' use of CAM with these patient populations. These data might provide insight into folk

remedies, culturally-based practices, self-care treatment modalities, and CAM modalities used for health conditions more prevalent in these populations. It would also be important to examine communication to determine whether NPs are likely or unlikely to initiate discussions about CAM or recommend CAM to these patient groups.

Findings of this study were based on NPs' self-reported responses about their use of CAM for women patients. Although NPs in this study reported discussing CAM with their patients, many health-care consumers have reported that their providers have not communicated with them about CAM (Dunn, 1997). Because communication may be perceived differently among providers and patients, a qualitative study could be conducted to compare NPs' responses with their patients' responses to questions regarding patterns and expectations of patient/provider communication about CAM. These data could be used to develop effective strategies for NPs to communicate with their patients about CAM and would expand on recommendations for provider/patient communication made by Eisenberg (1997) for physicians and Bushy (1992) for nurses working with patients who engage in culturally-based health-care practices.

Because researchers have reported that women are more likely to use CAM, studies focused on women, the types of CAM they use, and the reasons they use CAM would be important contributions to the literature. Berg (1996) has speculated as to reasons why women may be more likely to use CAM, although information about women's use of CAM is not available in the published research literature. Currently, studies are underway at the NIH Center for Complementary and Alternative Research in Women's Health to examine women's use of CAM (The Rosenthal Center for

Complementary and Alternative Medicine, 2000). It would be beneficial to focus future research on CAM for women's health on the most common types of CAM used and the most common reasons for their use. Based on the findings from this study, the focus would be on naturopathy/nutritional, vitamin, and/or herbal supplements, and guided imagery, meditation, visualization, and/or relaxation for chronic pain, musculoskeletal/joint problems, and headaches and migraines. These data would provide valuable information for nurses to use as a means of communicating with their women patients about the types of CAM other women are using for women's health conditions.

This study was limited in its focus to nine types of CAM. These types were selected and combined based on previous research and feedback from allopathic and non-allopathic health-care providers. However, several respondents commented that these types were too broad and suggested separating naturopathy and nutritional, vitamin, and/or herbal supplements into separate categories. In addition, one NP commented that herbal medicine is distinctly different from herbal supplements and should be listed separately. These comments were very insightful for two reasons: academic training institutions specific to naturopathy and herbal medicine are located in the state and supplements are marketed directly to women as self-care treatment modalities. Therefore, differences in NPs' use of each of these specific CAM modalities within the single category of "naturopathy/nutritional, vitamin, and/or herbal supplements" could not be determined based on the way in which the study was designed. Future research should focus on the use of each modality as a separate type of CAM. In addition, because this study was an initial step in determining the types of CAM used by NPs for

women's health, the next step would be to focus only on the types of CAM most commonly used, specifically naturopathy; nutritional, vitamin, and herbal supplements; and herbal medicine.

Finally, this study has contributed to the gap in the literature regarding NPs' use of CAM. Published studies have been conducted primarily with physicians (Berman et al., 1995; Blumberg et al., 1995; Borkan et al., 1994; Boucher & Lenz, 1998). The one study that included a small cohort of NPs was conducted to examine differences in use between adult primary care clinicians and obstetrics-gynecology clinicians, in which NPs were included (Gordon et al., 1998). Because nurse practice philosophy is known to integrate a holistic approach to health care and is acknowledged to be different from that of medical practice, it would be important to compare NPs' and physicians' attitudes/beliefs and communication about CAM and their knowledge and use of CAM for patient care. NPs in this study reported that they were least likely to use CAM in physician-based practices. This is surprising since researchers have reported physicians' positive attitudes towards the use of CAM, their interest in CAM, and the use of CAM with their patients (Berman et al., 1995; Blumberg et al., 1995; Borkan et al., 1994; Boucher & Lenz, 1998). The information gathered from a comparative study could be used to bridge the gap between NPs and physicians in shared practices with regard to the use of CAM.

Limitations

The study had several limitations. The first are related to the sample itself. The ethnicity and gender of this sample is assumed to be Caucasian and female, based on

aggregate demographic data on NPs in the state. Although the sample was assumed to be representative of the population, these data are limited to the use of CAM by a specific gender and ethnicity.

The second limitation pertains to how "use" of CAM was measured in this study. As noted previously, a number of preliminary steps were taken to determine which types of CAM to include and how they would be grouped within types to streamline the survey. However, respondents suggested that the categories were too broad. In addition, use of CAM was not defined in terms of frequency (e.g., use within the past 10 years of practice versus the last year). Finally, the focus of this study was on NPs' use of CAM for women's health so these data do not provide information about NPs' overall use of CAM with other patient populations in their practices (i.e., men and children).

Limitations associated with mail survey research also apply to this study. These include reliance on respondents for honest, accurate responses to the survey questions; restriction of response choices due to a predominantly forced-choice response format; financial constraints on sample size and the number of follow-up mailings due to supply and postage expenses; and the informal nature of a mailed questionnaire.

Another limitation is related to the unique aspects of health care in Oregon. First, a very broad scope of practice is recognized for NPs practicing in the state. This pertains to practice and provider referral autonomy, reimbursement for services, and prescriptive privileges including the ability to prescribe schedule II through V drugs without physician supervision. Oregon is also unique in the number and types of CAM educational institutions. The presence of these institutions may influence the availability

of CAM throughout the state as well as NPs' attitudes/beliefs and communication about and their knowledge and use of CAM for women's health. As a result, these findings may not be generalizeable to NPs' use of CAM for women's health in other states.

Finally, findings of this study may not be generalizeable to the population of NPs in Oregon because NPs who chose to participate in this study might have characteristics that differ from non-respondents. For example, NPs who participated may have taken the time to respond to the survey because they had more positive attitudes about CAM, greater interest in CAM, and/or used CAM to a greater extent in their practices.

Results Discussion Summary

The intent of this study was to provide insight into an area of nursing research that had not previously been addressed as an initial step toward understanding NPs' use of CAM for women's health. Based on four domains (use, attitudes/beliefs, knowledge, communication, the five major findings of this study were that the majority of NPs (a) used CAM in their practices for women's health, (b) were knowledgeable about the types of CAM they use, (c) incorporated a variety of methods to obtain information about CAM and CAM providers, (d) recognized benefits and negative implications of CAM use for their patients, (e) and communicated with their patients about CAM. While previous research has been conducted primarily with physicians, data from this study fill a gap in nursing literature and can be used to make a significant contribution to nursing education, practice, policy, and research. These findings will be used to embark on related research specific to attitudes/beliefs and communication about CAM and knowledge and use of CAM by baccalaureate-prepared and advanced practice-trained nurses for their patients.

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APPENDIX A

IRB Approval for Qualitative Study

OREGON HEALTH SCIENCES UNIVERSITY
Office of Compliance & Assurance, L106 (503) 494-7887

MEMO

Date: November 24, 1998

To: *Polly Kloster, RN, MS, SON-5S, c/o Mary Ann Curry* 11/24/98

From: Gary T. Chiodo, DMD, Chair, Institutional Review Board, L106
Leslie Bevan, PhD, Director, Compliance & Assurance, L106

Subject: *5235 EX*
Integrative Therapies and Women's Health: Attitudes, Beliefs, Knowledge, and Use Among Health Care Providers

Protocol/Consent Form Approval

We received your response to the IRB recommendation(s) on 11/17/98 .

Your protocol/consent form is approved for One Year effective 11/24/98 .

The IRB# and the date of this approval should be placed at the top right corner of the first page of the consent form.

Investigators must provide subjects with a copy of the consent form, keep a copy of the signed consent form with the research records, and place a signed copy in the patient's hospital/clinical medical record (if applicable).

If this project involves the use of an Investigational New Drug, a copy of the approved protocol must be forwarded to the Pharmacy and Therapeutics Committee (Pharmacy Services - Investigational Drugs, OP-16A).

If this is a cancer study, we will notify the Oregon Cancer Center (OCC) of the IRB approval. As the PI, you are responsible for providing the OCC with copies of the final approved protocol/consent form.

If other levels of review and approval are required, the project should not be started until all required approvals have been obtained. In addition, studies funded by external sources must be covered by an agreement signed by the sponsor and the Oregon Health Sciences University. Principal Investigators are not authorized to sign on behalf of the University.

Thank you.

APPENDIX B

QUALITATIVE STUDY INTERVIEW QUESTIONS

Interview Questions for Qualitative Study with

Allopathic and Non-Allopathic Health Care Providers

1. What term do you use to refer to complementary/alternative medicine (CAM)?
2. How would you define CAM?
3. What would you include in a list of CAM used for women's health?
4. Do you consider the use of CAM an important issue for women's health?
5. What would be important to include in an assessment of allopathic practitioner's knowledge about CAM for women's health?
6. What would be important to include in a survey of attitudes and beliefs of allopathic providers about the usefulness/efficacy of various types of CAM for women's health?
7. What would be important to consider when assessing allopathic providers' beliefs about who should provide CAM for women's health (i.e., education, licensing, and credentialing of CAM practitioners)?
8. What would be the most effective way to assess what influences the use of CAM by allopathic providers?
9. With regard to CAM, how should communication and collaboration of allopathic providers with patients be assessed?
10. Similarly, how should communication and collaboration of allopathic providers with CAM practitioners be assessed?
11. What are some other factors that could influence the use of CAM by allopathic providers for women's health?

12. Are there any additional issues of relevance that would be important to include in a survey of allopathic providers regarding the use of CAM for women's health?
13. Are there any related issues that might be considered too sensitive or too controversial, thereby resulting in disinterest or refusal of allopathic providers to complete such a survey?
14. Are there any additional suggestions for survey development or data collection that might increase interest and survey response among allopathic providers?
15. Would you be likely or unlikely to complete a survey of this nature?

APPENDIX C

INITIAL DRAFT OF THE SURVEY TOOL

Responses to these initial questions will provide overall demographic information about the participants in this survey of NPs. Please respond by checking the appropriate box/boxes or writing in the answer as indicated.

1. What is the geographic location of your practice?
   - ☐ Within Oregon
   - ☐ Outside of Oregon only. Please indicate what other state: _____
   - ☐ In Oregon and another state. Please indicate what other state: _____

2. What percentage of your patients are adult females?
   - ☐ None.
   - ☐ Less than 25%
   - ☐ 25% to 50%
   - ☐ 51% to 75%
   - ☐ 76% to 100%

3. Do you practice in a location within 60 miles of Portland?
   - ☐ Yes
   - ☐ No

4. Your practice is located in which type of geographic setting? If more than one, check the primary setting.
   - ☐ Frontier
   - ☐ Rural
   - ☐ Suburban
   - ☐ Urban

5. Do you practice primarily in a managed care setting?
   - ☐ Yes
   - ☐ No

6. Indicate the type of practice setting in which you primarily function as a NP.
   - ☐ Private/Independent
   - ☐ Physician-Based
   - ☐ Community/Public Health Care
   - ☐ Government
   - ☐ Academic Setting

7. What is the number of years you have practiced as a NP? _____ years

8. What is the average number of hours per week you practice as a NP? _____ hours

9. What is your age? _____ years

10. Indicate your NP specialty. Check all that apply.
    - ☐ Acute Care
    - ☐ Adult
    - ☐ College Health
    - ☐ Family
    - ☐ Geriatric
    - ☐ Nurse Midwife
    - ☐ Psychiatric/Mental Health
    - ☐ Women's Health Care
    - ☐ Other: _____

The following questions pertain to your own attitudes/beliefs and communication about CAM and your knowledge and use of CAM for women's health. Please respond by checking the appropriate box/boxes or writing in the answer as indicated.

11. What type of validation or evidence is important to you before recommending or using **CAM** with your female patients? Indicate by circling the number that best reflects the relative importance of each of the following.

Validation/Evidence	Degree of Importance Not Important → Very Important				
Theoretical scientific basis	1	2	3	4	5
Laboratory evidence	1	2	3	4	5
Clinical trials	1	2	3	4	5
Clinical experience	1	2	3	4	5
Colleagues' experience/recommendation	1	2	3	4	5
Personal/family experience	1	2	3	4	5
Patients' experience/recommendation	1	2	3	4	5
Other:	1	2	3	4	5
Other:	1	2	3	4	5

12. What type of validation or evidence is important to you before recommending or using an ***allopathic treatment*** for your female patients? Indicate by circling the number that best reflects the relative importance of each of the following.

Validation/Evidence	Degree of Importance Not Important ⟶ Very Important				
Theoretical scientific basis	1	2	3	4	5
Laboratory evidence	1	2	3	4	5
Clinical trials	1	2	3	4	5
Clinical experience	1	2	3	4	5
Colleagues' experience/recommendation	1	2	3	4	5
Personal/family experience	1	2	3	4	5
Patients' experience/recommendation	1	2	3	4	5
Other:	1	2	3	4	5

13. What contribution(s) do you think CAM can make to health care? Check all that apply.
    - ☐ Can cure disease.
    - ☐ Can improve quality of life.
    - ☐ Can provide patients with hope when allopathic remedies have failed.
    - ☐ Can offer useful alternatives to patients when allopathic remedies have failed.
    - ☐ Can offer less expensive treatment options.
    - ☐ Can offer treatment options with fewer uncomfortable side effects.
    - ☐ Can empower patients to take responsibility for their own health.
    - ☐ Other: _____
    - ☐ CAM cannot make any contribution to health care.

14. As a NP, do you provide CAM to your female patients?
    - ☐ Yes. If yes, why? Check all that apply.
        - ☐ Within NP scope of practice.
        - ☐ Enhances practice options.
        - ☐ Reimbursed or relatively inexpensive.
        - ☐ Beneficial/useful.
        - ☐ Patient demand.
        - ☐ Within personal practice philosophy.
        - ☐ Other: _____
    - ☐ No. If no, why not? Check all that apply.
        - ☐ Not within NP scope of practice.
        - ☐ Not evidence-based practice.
        - ☐ Not generally reimbursed; costly.
        - ☐ Not beneficial/useful.
        - ☐ Not in demand by patients.
        - ☐ Not within personal practice philosophy.
        - ☐ Other: _____

15. What level of preparation do you believe NPs should have in order to include the following CAM methods in their own practices? Choose only one of the following for each type of CAM: (1) License/certification; (2) Formal education (e.g., classes, seminars, and continuing education); (3) Informal education (e.g., Internet, magazines, personal experience) or (4) None.

Type of CAM	License/ Certification	Formal Education	Informal Education	None (i.e., NPs should not provide)
Biofeedback				
Chinese Medicine (e.g., acupressure, acupuncture, Chinese herbs)				
Chiropractic/Osteopathy				
Energy Healing (e.g., Reiki, Therapeutic Touch)				
Food/Nutritional Supplements (e.g., Neutraceuticals)				
Guided Imagery/Visualization				
Homeopathy				
Massage Therapy				
Meditation/Relaxation Therapy				
Movement Therapy (e.g., T'ai Chi, Qigong, Yoga)				
Naturopathy				
Vitamin and Herbal Supplements				
Other:				

16. What level of preparation do you believe nonallopathic CAM providers should have in order for you to refer your patients to them? Choose only one of the following for each type of CAM: (1) License/certification; (2) Formal education (e.g., classes, seminars, and continuing education); and (3) Informal education (e.g., Internet, magazines, personal experience); or (4) Not applicable (N/A), NPs should not refer for this type of CAM.

Type of CAM	License/ Certification	Formal Education	Informal Education	N/A (NPs should not refer for this type of CAM)
Biofeedback				
Chinese Medicine (e.g., acupressure, acupuncture, Chinese herbs)				
Chiropractic/Osteopathy				
Energy Healing (e.g., Reiki, Therapeutic Touch)				
Food/Nutritional Supplements (e.g., Neutraceuticals)				
Guided Imagery/Visualization				
Homeopathy				
Massage Therapy				
Meditation/Relaxation Therapy				
Movement Therapy (e.g., T'ai Chi, Qigong, Yoga)				
Naturopathy				
Vitamin and Herbal Supplements				
Other:				

17. Which of the following types of CAM do you believe should be included in managed care plans and/or be reimbursed by fee for service plans. List any other types of CAM not included that you believe should be included in managed care plans or fee for service plans.

Types of CAM	Health Plans (e.g., HMO)	Third-Party Payers (e.g., BCBS)	Government Programs (e.g., Medicaid)
Biofeedback			
Chinese Medicine (e.g., acupressure, acupuncture, Chinese Herbs)			
Chiropractic/Osteopathy			
Energy Healing (e.g., Reiki, Therapeutic Touch)			
Food/Nutritional Supplements (e.g., Neutraceuticals)			
Guided Imagery/Visualization			
Homeopathy			
Massage Therapy			
Meditation/RelaxationTherapy			
Movement Therapy (e.g., T'ai Chi, Qigong, Yoga)			
Naturopathy			
Vitamin and Herbal Supplements			
Other:			
Other:			

18. For each of the following types of CAM, please check all of the boxes that best reflect your CAM knowledge/training.

Type of CAM	Know Basic Principles of its Use	Know Requirements for Practice in Oregon	Know a Provider to Refer to	Practice as a Licensed/ Certified Provider	Use in Practice (Without a License/ Certification)
Biofeedback					
Chinese Medicine (e.g., acupressure, acupuncture, Chinese herbs)					
Chiropractic/Osteopathy					
Energy Healing (e.g., Reiki, Therapeutic Touch)					
Food/Nutritional Supplements (e.g., Neutraceuticals)				N/A	
Guided Imagery/Visualization				N/A	
Homeopathy					
Massage Therapy					
Meditation/Relaxation Therapy				N/A	
Movement Therapy (e.g., T'ai Chi, Qigong, Yoga)					
Naturopathy					
Vitamin and Herbal Supplements				N/A	
Other:					

19. At what point(s) in time have you received any education about CAM? Check all that apply.

- ☐ During your undergraduate nursing training
- ☐ During your NP training
- ☐ After formal/academic nursing training
- ☐ Never

20. What methods have you used to obtain information about CAM? Check all that apply.
- ☐ Conference/seminar (e.g., group education received through a condensed course or single session)
- ☐ Formal course (e.g., education received through an academic institution over a period of weeks or longer)
- ☐ Internet
- ☐ Nursing journals
- ☐ Allopathic health professional journals (non-nursing)
- ☐ CAM peer reviewed journals (e.g., Alternative Therapies in Health and Medicine, Integrative Medicine)
- ☐ Other CAM literature (e.g., the Yoga Journal, Prevention Magazine)
- ☐ Television/radio news reports
- ☐ Colleagues
- ☐ CAM providers
- ☐ Patients
- ☐ Family Friends
- ☐ Other: _____

21. What methods do you use to obtain information about CAM providers for your patients' needs? Check all that apply.
- ☐ Patient recommendations
- ☐ Colleague recommendations
- ☐ CAM providers in the health care setting in which you practice
- ☐ Telephone directories
- ☐ Advertisements/media
- ☐ Other: _____
- ☐ I don't obtain information about CAM providers.

22. When discussing treatment options for women's health issues, which of the following best describe your own practice?
- ☐ I generally include only allopathic treatment options.
- ☐ I always include allopathic treatment options but sometimes include CAM treatment options.
- ☐ I always include both allopathic and CAM treatment options.
- ☐ I always include CAM treatment options but sometimes include allopathic treatment options.
- ☐ I generally include only CAM treatment options.

23. How important is it to you to know if your female patients use CAM?
- ☐ Very important
- ☐ Somewhat important
- ☐ Not important

24. If CAM is discussed between you and your patients in your practice, who is more likely to bring it up?
    - ☐ You
    - ☐ Your female patient
    - ☐ Both of you
    - ☐ Neither you nor your patient. CAM is not discussed.

25. NPs have described barriers to discussing and recommending CAM options with their patients. Check all of the following reasons that influence why you may choose <u>not</u> to discuss CAM with your female patients.
    - ☐ Lack of knowledge about CAM methods or indications for use
    - ☐ Haven't come across any women's health problems in your practice that CAM would benefit
    - ☐ Don't believe CAM is effective
    - ☐ Lack of scientific evidence to support its use
    - ☐ CAM is not available/accessible to my patients
    - ☐ CAM is too expensive/not reimbursed by managed care or fee for service plans
    - ☐ CAM use is not supported by colleagues in your practice
    - ☐ Restrictions/limitations on CAM referral and practice exist in your practice setting
    - ☐ Fear of personal liability for promoting/supporting the use of CAM.
    - ☐ Fear of untoward interactions of CAM with allopathic treatment remedies
    - ☐ Not within the NPs' scope of practice
    - ☐ Fear of jeopardizing your license to practice as a NP
    - ☐ Patients are not interested in CAM
    - ☐ Other: _____
    - ☐ No barriers to discussing CAM with your patients

26. Under what circumstances ***do you ask*** your female patients about their use of CAM? Check all that apply.
    - ☐ Every initial/new patient visit
    - ☐ Routinely, every visit
    - ☐ Routinely, annually
    - ☐ Only for specific health problems
    - ☐ Only if you think a patient may be using CAM
    - ☐ Only after allopathic treatment has not been effective
    - ☐ Other: _____

27. Overall, if any of your female patients have initiated a discussion about CAM, at which point in time does this discussion ***typically*** occur? Check only one.
    - ☐ The initial visit
    - ☐ Subsequent visits, after a relationship has been established
    - ☐ After allopathic treatment has failed
    - ☐ My patients have not initiated discussions about CAM

28. If ***your female patients ever requested a referral*** for CAM treatment, when does this usually occur? Check only one.
    - ☐ The initial visit
    - ☐ Subsequent visits after a relationship has been established
    - ☐ After allopathic treatment has failed
    - ☐ Never had a request for CAM referral

29. Your referrals for CAM are typically based on which of the following? Check all that apply.
    - ☐ I have never referred a patient for CAM. **Skip to question #33.**
    - ☐ The patient requests it.
    - ☐ The CAM technique fits the patient's belief system.
    - ☐ The patient does not get better with my therapy.
    - ☐ The CAM technique complements my own therapy.
    - ☐ There are particular illnesses that CAM addresses better.
    - ☐ I believe the patient has a "culturally-based" illness.
    - ☐ There is a reputable CAM provider in the community with whom I have had good success.
    - ☐ I have experienced personal success using this CAM technique.
    - ☐ I have received referrals from a particular CAM provider.
    - ☐ Other: _____

30. When you refer female patients to CAM providers, do you follow up with the CAM provider regarding the patient's treatment?
    - ☐ No. **Go directly to question #33.**
    - ☐ Yes

31. Check all of the methods you use to follow up on referrals to CAM providers.
    - ☐ Telephone
    - ☐ Personal/face-to-face contact
    - ☐ Formal letter
    - ☐ Follow up letter
    - ☐ Send the patient's chart or essential information
    - ☐ Other: _____

32. Are your follow up practices for referrals to allopathic providers different than your follow up practices for referrals to CAM providers?
    - ☐ I don't refer to allopathic providers.
    - ☐ No. My follow up practices are essentially the same for both types of providers.
    - ☐ Yes. My follow up practices are different for allopathic providers. Please indicate how:
        - ☐ Follow up with allopathic providers is more formal (e.g., verbal or written communication).
        - ☐ Follow up with allopathic providers is less formal (e.g., no verbal or written communication).
33. Overall, are you comfortable discussing CAM for women's health with any of your coworkers/employers?
    - ☐ No
    - ☐ Yes. If yes, check all of the following that apply.
        - ☐ Physicians
        - ☐ NPs
        - ☐ Nurses (non-NPs)
        - ☐ Administration
        - ☐ Others: _____

34. For your own personal health care needs requiring a provider, as opposed to self-care, which of the following statements apply to you? Check all that apply.
    - ☐ You routinely seek treatment from an allopathic provider first.
    - ☐ You routinely seek treatment from a CAM provider first.
    - ☐ Your provider choice differs, typically depending on the health issue for which you are seeking treatment.
    - ☐ Your provider choice differs, typically depending on whether the care is reimbursed under your insurance plan.
    - ☐ Other: _____
    - ☐ You never seek treatment from a CAM provider.

35. If you use CAM for yourself (via self-care and/or a CAM provider) do you inform your own allopathic health care provider of your use of CAM?
    - ☐ I don't use CAM.
    - ☐ No, I don't inform my allopathic provider
    - ☐ Yes, I inform my allopathic provider.
    - ☐ Depends on the type of CAM.

36. What percentage of your female patients do you estimate are using CAM concomitantly with allopathic treatment for the same health problem (e.g., herbal supplements and prescription medications for depression)?
    - ☐ None. **Go directly to question #37.**
    - ☐ Don't know.
    - ☐ Less than 10%
    - ☐ 11% to 25%
    - ☐ 26%-50%
    - ☐ 51% to 75%
    - ☐ 76% to 99%
    - ☐ 100%

37. Overall, how often do you know when your patients are combining CAM and allopathic treatments for the same condition (e.g., massage therapy and prescription medications for muscle pain)? Check only one.
    - ☐ Less than 10%
    - ☐ ¼ of the time
    - ☐ ½ of the time
    - ☐ 3/4 of the time
    - ☐ All of the time

38. Which of the following ***general reasons*** do you recommend CAM, refer to a CAM provider, or provide CAM in your own practice for your female patients? Check all that apply in the following table.
    - ☐ I do not recommend CAM, refer to a CAM provider, or provide CAM to my female patients. Skip the following table and do not complete the final question.

General Reasons for CAM Use	Recommend Only	Refer to a CAM Provider	Provide CAM in Practice
Wellness/Health Promotion/Disease Prevention			
Symptom Management for Chronic Health Problems			
Symptom Management for Acute Health Problems			
Mental/Psychological Health Care Needs			
Other:			

Please complete the final question on the following page.

39. What types of CAM do you recommend, refer for, or provide to female patients in your own practice and for what specific women's health problems? Indicate whether you recommend, refer or provide CAM for each of the types of CAM and women's health condition that apply by writing in the appropriate number: 1 = recommend; 2 = refer; 3 = provide. In the example provided for headaches/migraines, the NP recommends biofeedback, Chinese medicine, guided imagery/visualization, massage therapy, and meditation/relaxation; the NP refers for biofeedback; and the NP provides guided imagery/visualization and massage therapy.

Women's Health Problems	Types of CAM											
	Bio-feed-back	Chinese Medicine (acupuncture, acupressure, herbs)	Chiropractic Osteopathy	Energy Healing	Food Nutritional Suppls.	Guided Imagery Visuali-zation	Home-opathy	Massage Therapy	Meditation Relaxation	Movement Therapy	Natur-opathy	Vit. & Nut. Suppls.
Example: Headaches/ Migraines	**1,2**	**1**				**1,3**		**1,3**	**1**			
Menstrual Disorders												
Pregnancy/ Prenatal Symptoms												
Labor/ Delivery												
Vaginal Infections												
UTIs												
Perimenopause Menopause												
Digestive Disorders												
Mental Health, Stress, Anxiety												
Musculoskeletal Problems												
Headaches/ Migraines												
Autoimmune Disorders												
Stress/Urinary Incontinence												
Wellness/Health Promotion												

Please address the following questions if they were not already addressed by our comments made on the survey tool.

1. What specific question(s) should be deleted from this survey tool? (List question number(s) and provide your rationale.)

2. What specific questions should be combined? (List question numbers and provide your rationale.)

3. What questions would you add to the survey that were not addressed and fall within the four domains of attitudes/beliefs, communication, knowledge, and use of CAM? (Please write your suggestions.)

4. Additional comments and suggestions for this survey.

If you are willing to be contacted regarding your specific comments, please sign your name below and provide information about your preferred method of being contacted.

NAME: _____

PREFERRED METHOD OF CONTACT:

- ☐ E-mail: _____
- ☐ Telephone: _____
- ☐ Other: _____

PLEASE RETURN THE ENTIRE SURVEY AND THIS PAGE IN THE ENVELOPE PROVIDED OR PLACE IN MY MAILBOX IN THE 5TH FLOOR READING ROOM AT OHSU.

APPENDIX D

SECOND DRAFT OF THE SURVEY TOOL

(For purposes of formatting, the page numbers do not reflect the actual survey page numbers used)

1. What type of validation or evidence do you depend on before recommending or using an **allopathic treatment** for your female patients? Please circle your answer.

VALIDATION/EVIDENCE	DEGREE OF IMPORTANCE NOT IMPORTANT → IMPORTANT				
THEORETICAL BASIS	1	2	3	4	5
SCIENTIFIC BASIS	1	2	3	4	5
LABORATORY EVIDENCE	1	2	3	4	5
CLINICAL TRIALS	1	2	3	4	5
COLLEAGUES' EXPERIENCE/RECOMMENDATION	1	2	3	4	5
PERSONAL/FAMILY EXPERIENCE	1	2	3	4	5
PATIENTS' EXPERIENCE/RECOMMENDATION	1	2	3	4	5
SUPPORTING LITERATURE	1	2	3	4	5
PREVAILING STANDARD OF CARE	1	2	3	4	5
OTHER:	1	2	3	4	5

2. Now, using the same question and focusing on CAM, what type of validation or evidence do you depend on before recommending or using **CAM** with your female patients?

VALIDATION/EVIDENCE	DEGREE OF IMPORTANCE NOT IMPORTANT → IMPORTANT				
THEORETICAL BASIS	1	2	3	4	5
SCIENTIFIC BASIS	1	2	3	4	5
LABORATORY EVIDENCE	1	2	3	4	5
CLINICAL TRIALS	1	2	3	4	5
COLLEAGUES' EXPERIENCE/RECOMMENDATION	1	2	3	4	5
PERSONAL/FAMILY EXPERIENCE	1	2	3	4	5
PATIENTS' EXPERIENCE/RECOMMENDATION	1	2	3	4	5
SUPPORTING LITERATURE	1	2	3	4	5
PREVAILING STANDARD OF CARE	1	2	3	4	5
OTHER:	1	2	3	4	5

3. What contribution(s) do you believe CAM makes to health care? **Check all that apply.**

- ☐ CAN CURE DISEASE.
- ☐ CAN IMPROVE QUALITY OF LIFE.
- ☐ CAN PROVIDE PATIENTS WITH HOPE WHEN ALLOPATHIC REMEDIES HAVE FAILED.
- ☐ CAN PROVIDE PATIENTS WITH USEFUL TREATMENT ALTERNATIVES WHEN ALLOPATHIC REMEDIES HAVE FAILED.
- ☐ CAN OFFER LESS EXPENSIVE TREATMENT OPTIONS.
- ☐ CAN OFFER TREATMENT OPTIONS WITH FEWER UNCOMFORTABLE SIDE EFFECTS.
- ☐ CAN EMPOWER PATIENTS TO TAKE RESPONSIBILITY FOR THEIR OWN HEALTH.
- ☐ CAN PROVIDE YOU, THE PRACTITIONER, WITH A MORE MEANINGFUL WAY TO HELP PEOPLE HEAL
- ☐ CAN MAKE CONTRIBUTIONS WHEN THERE IS MORE EVIDENCE TO ASSURE ITS SAFETY AND EFFICACIOUSNESS.
- ☐ CAN INCREASE HEALTH CARE COSTS TO PATIENTS
- ☐ CAN ENDANGER PATIENTS IF NOT INCLUDED BY A PROVIDER IN THE TOTAL PLAN OF CARE DUE TO UNTOWARD INTERACTIONS
- ☐ CAN HAVE A NEGATIVE IMPACT ON PATIENTS DUE TO LACK OF QUALITY ASSURANCE AND LACK OF STANDARDIZATION REGARDING PRODUCT SAFETY AND EFFICACY (e.g., HERBAL REMEDIES)
- ☐ CANNOT MAKE ANY CONTRIBUTIONS TO HEALTH CARE.
- ☐ OTHER: _____

4. As a NP, do you recommend CAM to your female patients?

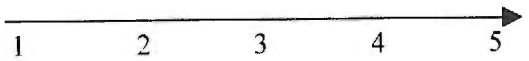
☐ YES. IF YES, WHY? **CHECK ALL THAT APPLY.**

- ☐ WITHIN NP SCOPE OF PRACTICE.
- ☐ ENHANCES PRACTICE OPTIONS.
- ☐ REIMBURSED OR RELATIVELY INEXPENSIVE.
- ☐ BENEFICIAL/USEFUL.
- ☐ PATIENT DEMAND.
- ☐ READILY ACCESSIBLE/AVAILABLE TO YOUR PATIENTS.
- ☐ CAM REFERRALS AND/OR PRACTICE ARE ENCOURAGED IN YOUR PRACTICE SETTING.
- ☐ WITHIN PERSONAL PRACTICE PHILOSOPHY.
- ☐ OTHER: _____

☐ NO. IF NO, WHY NOT? **CHECK ALL THAT APPLY.**

- ☐ NOT WITHIN NP SCOPE OF PRACTICE.
- ☐ FEAR OF PERSONAL LIABILITY FOR PROMOTING/SUPPORTING CAM USE.
- ☐ FEAR OF JEOPARDIZING YOUR LICENSE TO PRACTICE AS A NP.
- ☐ FEAR OF UNTOWARD INTERACTIONS OF CAM WITH ALLOPATHIC TREATMENT REMEDIES.
- ☐ NOT EVIDENCE-BASED PRACTICE.
- ☐ NOT GENERALLY REIMBURSED; COSTLY.
- ☐ NOT BENEFICIAL/USEFUL.
- ☐ NOT IN DEMAND BY PATIENTS.
- ☐ NOT READILY ACCESSIBLE/AVAILABE TO YOUR PATIENTS.
- ☐ RESTRICTIONS/LIMITATIONS ON CAM REFERRAL AND/OR PRACTICE EXIST IN YOUR PRACTICE SETTING
- ☐ NOT WITHIN PERSONAL PRACTICE PHILOSOPHY.
- ☐ NOT TRAINED/KNOWLEDGEABLE IN CAM
- ☐ OTHER: _____

5. As a NP, how important is it to you to be knowledgeable about CAM for women's health? **Circle the number** that best reflects your answer.

NOT IMPORTANT  VERY IMPORTANT

1 2 3 4 5

6. How have you obtained information about CAM? **Check all that apply**.

- ☐ UNDERGRADUATE NURSING TRAINING
- ☐ NP TRAINING
- ☐ CONFERENCE/SEMINAR (i.e., GROUP EDUCATION RECEIVED THROUGH A CONDENSED COURSE OR C.E. SESSION)
- ☐ INTERNET
- ☐ NURSING JOURNALS/BOOKS
- ☐ ALLOPATHIC HEALTH PROFESSIONAL JOURNALS (NON-NURSING)
- ☐ CAM PEER REVIEWED JOURNALS (e.g., ALTERNATIVE THERAPIES IN HEALTH AND MEDICINE, INTEGRATIVE MEDICINE)
- ☐ OTHER CAM LITERATURE (e.g., THE YOGA JOURNAL, PREVENTION MAGAZINE)
- ☐ TELEVISION/RADIO NEWS REPORTS
- ☐ COLLEAGUES
- ☐ CAM PROVIDERS
- ☐ PROFESSIONAL ORGANIZATIONS/INSTITUTIONS (e.g., CHIROPRACTICE ASSN./ORIENTAL COLLEGE OF CHINESE MEDICINE)
- ☐ PATIENTS
- ☐ FAMILY FRIENDS
- ☐ NEVER OBTAINED INFORMATION ABOUT CAM
- ☐ OTHER: _____

7. How would you describe your own knowledge of the following types of CAM? Please check **all boxes** that apply to you.

Types of CAM	Interested in learning more	Know basic principles	Know providers to refer to	Know requirements for practice in Oregon	Have received 'formal' CAM education	Are a licensed/ certified provider
Biofeedback						
Chinese Medicine (e.g., acupressure, acupuncture, Chinese herbs)						
Energy Healing (e.g., Reiki, Therapeutic Touch)						
Guided Imagery/ Visualization/ Meditation/ Relaxation Therapy						
Homeopathy						
Manipulative Therapies (e.g., Chiropractic/Oseopathy)						
Massage Therapy/Reflexology						
Movement Therapy (e.g., T'ai Chi, Qigong, Yoga)						
Naturopathy/Nutritional, Vitamin, Herbal Supplements						
Other:						

8. When you discuss treatment options with your patients for women's health, which **one** of the following options **best describe** your own practice?

- ☐ YOU GENERALLY INCLUDE ONLY ALLOPATHIC TREATMENT OPTIONS.
- ☐ YOU ALWAYS INCLUDE ALLOPATHIC TREATMENT OPTIONS BUT SOMETIMES INCLUDE CAM TREATMENT OPTIONS.
- ☐ YOU ALWAYS INCLUDE BOTH ALLOPATHIC AND CAM TREATMENT OPTIONS.
- ☐ YOU ALWAYS INCLUDE CAM TREATMENT OPTIONS BUT SOMETIMES INCLUDE ALLOPATHIC TREATMENT OPTIONS.
- ☐ YOU GENERALLY INCLUDE ONLY CAM TREATMENT OPTIONS.

9. In general, how important is it to you to know if your female patients use CAM?
Circle the number that best reflects your answer.

NOT IMPORTANT ⟶ VERY IMPORTANT

1 2 3 4 5

10. If you and your patients discuss CAM, who is more likely to bring it up? **Check only one.**

- ☐ YOU
- ☐ YOUR PATIENT
- ☐ USUALLY BOTH OF YOU
- ☐ NEITHER OF YOU, CAM NEVER DISCUSSED. SKIP TO QUESTION #12.

11. Under which of the following circumstances **do you ask** your female patients about their use of CAM?
Check all that apply.

- ☐ EVERY INITIAL/NEW PATIENT VISIT
- ☐ ROUTINELY, EVERY VISIT
- ☐ ROUTINELY, ANNUALLY
- ☐ ONLY FOR SPECIFIC HEALTH PROBLEMS
- ☐ SUBSEQUENT VISITS, AFTER A RELATIONSHIP HAS BEEN ESTABLISHED
- ☐ ONLY IF YOU THINK A PATIENT MAY BE USING CAM
- ☐ ONLY AFTER ALLOPATHIC TREATMENT HAS NOT BEEN EFFECTIVE
- ☐ WHEN THERE HAS BEEN RECENT MEDIA ATTENTION ABOUT CAM (e.g., ST. JOHN'S WORT FOR DEPRESSION)
- ☐ OTHER: _____

12. Do you ever **refer** patients to CAM providers?

- ☐ YES
- ☐ NO. **IF NO, SKIP TO QUESTION #16.**

13. Your referrals for CAM are typically based on which of the following? **Check all that apply.**

- ☐ YOUR PATIENTS' REQUESTS IT.
- ☐ CAM TECHNIQUES FITS THE PATIENT'S BELIEF SYSTEM OR VALUES.
- ☐ THE PATIENT DOES NOT GET BETTER WITH AN ALLOPATHIC TREATMENT.
- ☐ THE CAM TECHNIQUE COMPLEMENTS YOUR OWN TREATMENT PLAN.
- ☐ CAM ADDRESSES PARTICULAR ILLNESSES BETTER.
- ☐ THE PATIENT HAS "CULTURALLY-BASED" VALUES AND PREFERENCES.
- ☐ THERE IS A REPUTABLE CAM PROVIDER IN THE COMMUNITY WITH WHOM YOU HAVE HAD GOOD SUCCESS.
- ☐ PERSONALLY, YOU HAVE EXPERIENCED SUCCESS USING THIS CAM TECHNIQUE.
- ☐ YOU HAVE RECEIVED REFERRALS FROM THE CAM PROVIDERS TO WHOM YOU REFER.
- ☐ YOU ARE ALSO A CAM PROVIDER.
- ☐ OTHER: _____

14. Which of the following do you use in deciding to refer a patient to a **CAM provider**? **Check all that apply.**

- ☐ PATIENT RECOMMENDATIONS/FEEDBACK
- ☐ COLLEAGUE RECOMMENDATIONS
- ☐ PROVIDER PANEL OR PRACTICE GROUP CAM PROVIDER
- ☐ TELEPHONE DIRECTORIES
- ☐ PROFESSIONAL ORGANIZATIONS/INSTITUTIONS (e.g, CHIROPRACTICE ASSN./ORIENTAL COLLEGE OF CHINESE MEDICINE)
- ☐ ADVERTISEMENTS/MEDIA
- ☐ OTHER: _____.

15. When **you refer** female patients to CAM providers, do you follow up with the **CAM provider** regarding the patient's treatment?

- ☐ NO.
- ☐ YES. If yes, indicate the type of follow up pratice you generally use. **check one.**
  - ☐ FOLLOW UP IS USUALLY FORMAL WRITTEN COMMUNICATION/CHART NOTE
  - ☐ FOLLOW UP IS USUALLY INFORMAL VERBAL COMMUNICATION, NO CHART NOTE

16. If you **do not** recommend, refer for, or provide CAM, **skip to question #17.**
Although the use of CAM is generally individualized based on each patient's needs, the following questions pertain to your general/overall use of CAM for your female patients. With this in mind, which of the following categories of CAM do you recommend, refer for, or provide to the female patients in your own practice and for which specific health problems? Indicate whether you recommend, refer, or provide CAM for each of the types of CAM and women's health condition that apply by writing in the appropriate number: **1 = recommend; 2 = refer; 3 = provide**. In the example provided, for headaches/migraines the NP recommends biofeedback, acupressure, and relaxation; the NP refers for biofeedback; and the NP provides guided imagery and massage therapy.

Common Women's Health Problems	Types of Complementary/Alternative Medicine (CAM)								
	Biofeedback	Chinese Medicine (e.g., acupuncture, acupressure, Chinese herbs)	Energy Healing (e.g., Reiki, Therapeutic Touch)	Guided Imagery/ Visualization/ Meditation/ Relaxation	Homeopathy	Manipulative Therapies (e.g, Chiropractic Osteopathy)	Massage Therapy/ Reflexology	Movement Therapy (e.g., T'ai Chi, Qigong, Yoga)	Naturopathy/ Nutritional, Vitamin, Herbal Supplements
EXAMPLE: Headaches/Migraines	**1, 2**	**1**		**1,3**			**3**		
Breast Tenderness									
Chronic Pain									
Digestive Disorders									
Fatigue									
Headaches/ Migraines									
Menstrual Disorders									
Mental Health, Stress, Anxiety, Depression									
Musculoskeletal/ Joint Problems									
Perimenopause Menopause									
Pregnancy/ Prenatal Symptoms									
Sleep Disorders									
Stress/Urinary Incontinence									
UTIs									
Vaginal Infections									
Weight Control									
Wellness/ Health Promotion									
Other:									

17. In general, for your own personal health care needs requiring a provider, as opposed to self-care, which of the following statements apply to you? **Check all that apply.**
    - ☐ YOU ROUTINELY SEEK TREATMENT FROM AN ALLOPATHIC PROVIDER FIRST.
    - ☐ YOU ROUTINELY SEEK TREATMENT FROM A CAM PROVIDER FIRST.
    - ☐ YOUR PROVIDER CHOICE DIFFERS, DEPENDING ON THE HEALTH ISSUE FOR WHICH YOU ARE SEEKING TREATMENT.
    - ☐ YOUR PROVIDER CHOICE DIFFERS, DEPENDING ON WHETHER THE CARE IS REIMBURSED UNDER YOUR INSURANCE PLAN.
    - ☐ YOU NEVER SEEK TREATMENT FROM A CAM PROVIDER.
    - ☐ OTHER: _____

18. In what year were you born? _____

19. How many years have you practiced as a NP? _____YEARS

20. What is the average number of hours per week you currently practice as a NP? _____ TOTAL HOURS

21. Indicate the NP **specialty** in which you were **educated** and in which you **practice**. Check all that apply.

Educated	Practice	Specialty Area
☐	☐	ACUTE CARE
☐	☐	ADULT
☐	☐	COLLEGE HEALTH
☐	☐	EMERGENCY ROOM
☐	☐	FAMILY
☐	☐	GERIATRIC
☐	☐	NURSE MIDWIFE
☐	☐	OCCUPATIONAL
☐	☐	PSYCHIATRIC/MENTAL HEALTH
☐	☐	SCHOOL HEALTH
☐	☐	WOMEN'S HEALTH CARE
☐	☐	OTHER: _____

22. Are you licensed/certified as a CAM provider?
    - ☐ NO. **SKIP TO QUESTION #25**
    - ☐ YES. What is your cam licensure/certification? _____

23. How many hours per week to you practice as a CAM provider? _____HOURS

24. How would you best describe how you practice as a NP who is also a licensed/certified CAM provider? **Choose one.**
    - ☐ MOSTLY AS A NP
    - ☐ MOSTLY AS A NP WHO INTEGRATES CAM
    - ☐ MOSTLY AS A CAM PROVIDER

25. What is the geographic location of your current practice?
    - ☐ WITHIN OREGON ONLY.
    - ☐ OUTSIDE OF OREGON ONLY. PLEASE INDICATE WHAT STATE: _____
    - ☐ IN OREGON AND ANOTHER STATE. PLEASE INDICATE WHAT OTHER STATE: _____

26. Do you practice in a location within 60 miles of the Portland metropolitan area?
    - ☐ YES
    - ☐ NO

27. What is the **primary** setting of your practice?
    - ☐ RURAL/FRONTIER (POPULATION <25,000)
    - ☐ SUBURBAN (POPULATION OF 25,000-50,000 POP)
    - ☐ URBAN (POPULATION >50,000)

28. Indicate the type of practice setting in which you **primarily** function as a NP.
    - ☐ PRIVATE/INDEPENDENT
    - ☐ GROUP PRACTICE
    - ☐ COMMUNITY HEALTH
    - ☐ GOVERNMENT (i.e., INDIAN HEALTH/VA/PUBLIC HEALTH)
    - ☐ ACADEMIC
    - ☐ SCHOOL/COLLEGE CLINIC
    - ☐ OCCUPATIONAL
    - ☐ CORRECTIONAL FACILITY
    - ☐ HOSPITAL OUTPATIENT CLINIC
    - ☐ OTHER: _____

29. Is the practice setting in which you primarily function a managed care setting? (i.e., Kaiser, Blue Cross)
    - ☐ YES
    - ☐ NO

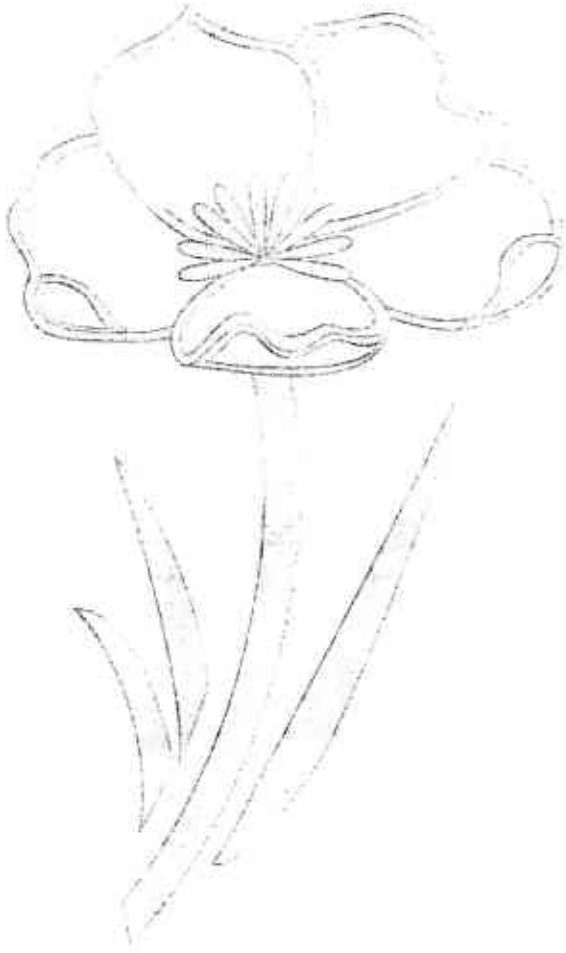
30. Anything else that would help understanding how your personal or professional experience has influenced your use/nonuse of CAM with your female patients may be added here.

APPENDIX E

FINAL DRAFT OF THE SURVEY TOOL

(For purposes of formatting, the page numbers do not reflect the actual survey page numbers used)

Nurse Practitioners' Use of Complementary Therapies for Women's Health



1. What type of validation or evidence do you depend on before recommending or using an **allopathic treatment** for your female patients? Please circle your answer.

VALIDATION/EVIDENCE	DEGREE OF IMPORTANCE NOT IMPORTANT → VERY IMPORTANT				
THEORETICAL BASIS	1	2	3	4	5
SCIENTIFIC BASIS	1	2	3	4	5
LABORATORY EVIDENCE	1	2	3	4	5
CLINICAL TRIALS	1	2	3	4	5
COLLEAGUES' EXPERIENCE/RECOMMENDATION	1	2	3	4	5
PERSONAL/FAMILY EXPERIENCE	1	2	3	4	5
PATIENTS' EXPERIENCE/RECOMMENDATION	1	2	3	4	5
SUPPORTING LITERATURE	1	2	3	4	5
PREVAILING STANDARD OF CARE	1	2	3	4	5
OTHER:	1	2	3	4	5

2. Now, using the same question and focusing on CAM, what type of validation or evidence do you depend on before recommending or using **CAM** with your female patients?

VALIDATION/EVIDENCE	DEGREE OF IMPORTANCE NOT IMPORTANT → VERY IMPORTANT				
THEORETICAL BASIS	1	2	3	4	5
SCIENTIFIC BASIS	1	2	3	4	5
LABORATORY EVIDENCE	1	2	3	4	5
CLINICAL TRIALS	1	2	3	4	5
COLLEAGUES' EXPERIENCE/RECOMMENDATION	1	2	3	4	5
PERSONAL/FAMILY EXPERIENCE	1	2	3	4	5
PATIENTS' EXPERIENCE/RECOMMENDATION	1	2	3	4	5
SUPPORTING LITERATURE	1	2	3	4	5
PREVAILING STANDARD OF CARE	1	2	3	4	5
OTHER:	1	2	3	4	5

3. NPs have generated a list of advantages and disadvantages CAM brings to health care. **Do you agree** with each of these general statements about CAM?

YES	NO	
☐	☐	CAM CAN CURE DISEASE.
☐	☐	CAM CAN IMPROVE QUALITY OF LIFE.
☐	☐	CAM CAN PROVIDE PATIENTS WITH HOPE WHEN ALLOPATHIC REMEDIES HAVE FAILED.
☐	☐	CAM CAN PROVIDE PATIENTS WITH USEFUL TREATMENT ALTERNATIVES WHEN ALLOPATHIC REMEDIES HAVE FAILED.
☐	☐	CAM CAN OFFER LESS EXPENSIVE TREATMENT OPTIONS.
☐	☐	CAM CAN OFFER TREATMENT OPTIONS WITH FEWER UNCOMFORTABLE SIDE EFFECTS.
☐	☐	CAM CAN EMPOWER PATIENTS TO TAKE RESPONSIBILITY FOR THEIR OWN HEALTH.
☐	☐	CAM CAN PROVIDE YOU, THE PRACTITIONER, WITH A MORE MEANINGFUL WAY TO HELP PEOPLE HEAL
☐	☐	CAM CAN MAKE POSITIVE CONTRIBUTIONS TO HEALTH CARE WHEN THERE IS MORE EVIDENCE TO ASSURE ITS SAFETY AND EFFICACIOUSNESS.
☐	☐	CAM USE CAN INCREASE HEALTH CARE COSTS TO PATIENTS
☐	☐	CAM CAN ENDANGER PATIENTS IF NOT INCLUDED BY A PROVIDER IN THE TOTAL PLAN OF CARE DUE TO UNTOWARD INTERACTIONS
☐	☐	CAM CAN HAVE A NEGATIVE IMPACT ON PATIENTS DUE TO LACK OF QUALITY ASSURANCE AND LACK OF STANDARDIZATION REGARDING PRODUCT SAFETY AND EFFICACY (e.g., HERBAL REMEDIES)
☐	☐	CAM DOES NOT MAKE ANY POSITIVE CONTRIBUTIONS TO HEALTH CARE.
☐	☐	OTHER: _____

4. As a NP, do you ever **recommend** CAM to your female patients?
   - ☐ Yes
   - ☐ No

5. **Do you agree** with each of these statements about the use of CAM for your own female patients?

YES	NO	
☐	☐	USE OF CAM IS WITHIN YOUR SCOPE OF PRACTICE AS A NP.
☐	☐	CAM ENHANCES YOUR PRACTICE OPTIONS.
☐	☐	CAM IS REIMBURSED AND/OR RELATIVELY INEXPENSIVE.
☐	☐	CAM IS BENEFICIAL/USEFUL TO PATIENTS IN YOUR PRACTICE.
☐	☐	YOUR PATIENTS REQUEST CAM.
☐	☐	CAM IS READILY ACCESSIBLE/AVAILABLE TO YOUR PATIENTS.
☐	☐	CAM REFERRALS AND/OR PRACTICE ARE ENCOURAGED IN YOUR PRACTICE SETTING.
☐	☐	CAM IS WITHIN YOUR PERSONAL PRACTICE PHILOSOPHY.
☐	☐	YOU FEEL WELL-TRAINED/KNOWLEDGEABLE IN CAM.
☐	☐	YOU ARE AFRAID OF PERSONAL LIABILITY FOR PROMOTING/SUPPORTING CAM USE IN YOUR PRACTICE.
☐	☐	YOU ARE AFRAID OF JEOPARDIZING YOUR LICENSE TO PRACTICE AS A NP IF YOU USE CAM IN YOUR PRACTICE.
☐	☐	YOU ARE CONCERNED ABOUT UNTOWARD INTERACTIONS OF CAM WITH ALLOPATHIC TREATMENT REMEDIES.

6. As a NP, how important is it to you to be knowledgeable about CAM for women's health?
Circle the number that best reflects your answer.

NOT IMPORTANT ← 1 2 3 4 5 → VERY IMPORTANT

7. NPs have obtained CAM information through a variety of methods. Have you learned about CAM in the following ways?

YES	NO	
☐	☐	UNDERGRADUATE NURSING TRAINING
☐	☐	NP TRAINING
☐	☐	CONFERENCE/SEMINAR (i.e., GROUP EDUCATION RECEIVED THROUGH A CONDENSED COURSE OR C.E. SESSION)
☐	☐	INTERNET
☐	☐	NURSING JOURNALS/BOOKS
☐	☐	ALLOPATHIC HEALTH PROFESSIONAL JOURNALS (NON-NURSING)
☐	☐	CAM PEER REVIEWED JOURNALS (e.g., ALTERNATIVE THERAPIES IN HEALTH AND MEDICINE)
☐	☐	OTHER CAM LITERATURE (e.g., THE YOGA JOURNAL, PREVENTION MAGAZINE)
☐	☐	TELEVISION/RADIO NEWS REPORTS
☐	☐	COLLEAGUES
☐	☐	CAM PROVIDERS
☐	☐	PROFESSIONAL ORGANIZATIONS/INSTITUTIONS (e.g., CHIROPRACTICE ASSN./OREGON COLLEGE OF ORIENTAL MEDICINE)
☐	☐	PATIENTS
☐	☐	FAMILY FRIENDS
☐	☐	NEVER OBTAINED INFORMATION ABOUT CAM
☐	☐	OTHER: _____

8. How would you describe your own knowledge of the following types of CAM? Please check **all boxes** that apply to you.

Types of CAM	Interested in learning more	Know basic principles	Know providers to refer to	Know requirements for practice in Oregon	Have received 'formal' CAM Education	Are a licensed/ certified CAM provider
Biofeedback						
Chinese Medicine (e.g., acupressure, acupuncture, Chinese herbs)						
Energy Healing (e.g., Reiki, Therapeutic Touch)						
Guided Imagery/ Visualization/ Meditation/ Relaxation Therapy						
Homeopathy						
Manipulative Therapies (e.g., Chiropractic/Osteopathy)						
Massage Therapy/Reflexology						
Movement Therapy (e.g., T'ai Chi, Qigong, Yoga)						
Naturopathy/Nutritional, Vitamin, Herbal Supplements						
Other:						

9. When you discuss treatment options with your patients for women's health, which one of the following options **best describes** your own practice? **Check only one**.

- ☐ YOU GENERALLY INCLUDE ONLY ALLOPATHIC TREATMENT OPTIONS.
- ☐ YOU ALWAYS INCLUDE ALLOPATHIC TREATMENT OPTIONS BUT SOMETIMES INCLUDE CAM TREATMENT OPTIONS.
- ☐ YOU ALWAYS INCLUDE BOTH ALLOPATHIC AND CAM TREATMENT OPTIONS.
- ☐ YOU ALWAYS INCLUDE CAM TREATMENT OPTIONS BUT SOMETIMES INCLUDE ALLOPATHIC TREATMENT OPTIONS.
- ☐ YOU GENERALLY INCLUDE ONLY CAM TREATMENT OPTIONS.

10. In general, how important is it to you to know if your female patients use CAM?
Circle the number that best reflects your answer.

NOT IMPORTANT ◄——————————————► VERY IMPORTANT
1 2 3 4 5

11. If you and your patients discuss CAM, who is more likely to bring it up? **Check only one.**

- ☐ YOU
- ☐ YOUR PATIENT
- ☐ USUALLY BOTH OF YOU
- ☐ NEITHER OF YOU. CAM IS NEVER DISCUSSED. **IF NEITHER OF YOU, SKIP TO QUESTION #13.**

12. **Do you ask** your female patients about their use of CAM in the following circumstances?

YES	NO	
☐	☐	EVERY INITIAL/NEW PATIENT VISIT
☐	☐	ROUTINELY, EVERY VISIT
☐	☐	ROUTINELY, ANNUALLY
☐	☐	SUBSEQUENT VISITS, AFTER A RELATIONSHIP HAS BEEN ESTABLISHED
☐	☐	WHEN THERE HAS BEEN RECENT MEDIA ATTENTION ABOUT CAM (e.g., ST. JOHN'S WORT FOR DEPRESSION)
☐	☐	ONLY FOR SPECIFIC HEALTH PROBLEMS
☐	☐	ONLY IF YOU THINK A PATIENT MAY BE USING CAM
☐	☐	ONLY AFTER ALLOPATHIC TREATMENT HAS NOT BEEN EFFECTIVE
☐	☐	OTHER: _____

13. Do you ever **refer** patients to CAM providers?

- ☐ YES
- ☐ NO. **IF NO, SKIP TO QUESTION #17.**

14. **Do you refer** your patients for CAM for the following reasons?

YES	NO	
☐	☐	YOUR PATIENTS' REQUESTS IT.
☐	☐	CAM TECHNIQUES FITS THE PATIENT'S BELIEF SYSTEM OR VALUES.
☐	☐	THE PATIENT DOES NOT GET BETTER WITH AN ALLOPATHIC TREATMENT.
☐	☐	THE CAM TECHNIQUE COMPLEMENTS YOUR OWN TREATMENT PLAN.
☐	☐	CAM ADDRESSES PARTICULAR ILLNESSES BETTER.
☐	☐	THE PATIENT HAS "CULTURALLY-BASED" VALUES AND PREFERENCES.
☐	☐	THERE IS A REPUTABLE CAM PROVIDER IN THE COMMUNITY WITH WHOM YOU HAVE HAD GOOD SUCCESS.
☐	☐	PERSONALLY, YOU HAVE EXPERIENCED SUCCESS USING THIS CAM TECHNIQUE.
☐	☐	YOU HAVE RECEIVED REFERRALS FROM THE CAM PROVIDERS TO WHOM YOU REFER.
☐	☐	YOU ARE ALSO A CAM PROVIDER.
☐	☐	OTHER: _____

15. Do you use the following methods to obtain information about **CAM providers** for your patients' needs?

YES	NO	
☐	☐	PATIENT RECOMMENDATIONS/FEEDBACK
☐	☐	COLLEAGUES' RECOMMENDATIONS
☐	☐	CAM PROVIDER IS A MEMBER OF YOUR PROVIDER PANEL OR PRACTICE GROUP
☐	☐	TELEPHONE DIRECTORIES
☐	☐	PROFESSIONAL ORGANIZATIONS/INSTITUTIONS (e.g, CHIROPRACTICE ASSN./ORIENTAL COLLEGE OF CHINESE MEDICINE)
☐	☐	ADVERTISEMENTS/MEDIA
☐	☐	OTHER: _____.

16. When you **refer** female patients to CAM providers, do you **generally** follow up with the **CAM provider** regarding the patient's treatment?

☐ NO.

☐ YES. If yes, indicate the type of follow up practice you generally use. **Check one**.

- ☐ FOLLOW UP IS USUALLY FORMAL WRITTEN COMMUNICATION/CHART NOTE
- ☐ FOLLOW UP IS USUALLY INFORMAL VERBAL COMMUNICATION, NO CHART NOTE

17. Although the use of CAM is generally individualized based on each patient's needs, the following questions pertain to your general/overall use of CAM for your female patients. With this in mind, which of the following categories of CAM do you recommend, refer for, or provide to your female patients and for which specific health problems? Indicate whether you recommend, refer, or provide CAM for each of the types of CAM and women's health conditions by writing in the appropriate number: **1 = recommend; 2 = refer; 3 = provide**. In the example provided, a NP who recommends meditation and massage therapy, who refers for biofeedback, and who provides guided imagery for fatigue would complete the first row of the table as follows.

Common Women's Health Problems	Types of Complementary/Alternative Medicine (CAM)								
	Bio-feedback	Chinese Medicine (e.g., acupuncture, acupressure, Chinese herbs)	Energy Healing (e.g., Reiki, Therapeutic Touch)	Guided Imagery/ Visualization/ Meditation/ Relaxation	Homeopathy	Manipulative Therapies (e.g, Chiropractic Osteopathy)	Massage Therapy/ Reflexology	Movement Therapy (e.g., T'ai Chi, Qigong, Yoga)	Naturopathy/ Nutritional, Vitamin, Herbal Supplements
EXAMPLE: Fatigue	**2**			**1, 3**			**1**		
Breast Tenderness									
Chronic Pain									
Digestive Disorders									
Fatigue									
Headaches/ Migraines									
Menstrual Disorders									
Mental Health, Stress, Anxiety, Depression									
Musculoskeletal/ Joint Problems									
Perimenopause Menopause									
Pregnancy/ Prenatal Symptoms									
Sleep Disorders									
Stress/Urinary Incontinence									
UTIs									
Vaginal Infections									
Weight Control									
Wellness/ Health Promotion									
Other:									

Only if you **do not** recommend, refer, or provide CAM to women, please check the box provided and continue with question #18 -- ☐ --

18. In general, for your own personal health care needs requiring a provider, as opposed to self-care, do the following statements apply to you?

YES	NO	
☐	☐	YOU ROUTINELY SEEK TREATMENT FROM AN ALLOPATHIC PROVIDER FIRST.
☐	☐	YOU ROUTINELY SEEK TREATMENT FROM A CAM PROVIDER FIRST.
☐	☐	YOUR PROVIDER CHOICE DIFFERS, DEPENDING ON THE HEALTH ISSUE FOR WHICH YOU ARE SEEKING TREATMENT.
☐	☐	YOUR PROVIDER CHOICE DIFFERS, DEPENDING ON WHETHER THE CARE IS REIMBURSED UNDER YOUR INSURANCE PLAN.
☐	☐	YOU NEVER SEEK TREATMENT FROM A CAM PROVIDER.
☐	☐	OTHER: _____

19. In what year were you born? _____

20. How many years have you practiced as a NP? _____YEARS

21. What is the average number of hours per week you currently practice as a NP? _____ TOTAL HOURS

22. Indicate the NP **specialty** in which you were **educated** and in which you **practice. Check all that apply.**

Educated	Practice	Specialty Area
☐	☐	ACUTE CARE
☐	☐	ADULT HEALTH
☐	☐	COLLEGE HEALTH
☐	☐	EMERGENCY ROOM
☐	☐	FAMILY HEALTH
☐	☐	GERIATRICS
☐	☐	NURSE MIDWIFE
☐	☐	OCCUPATIONAL HEALTH
☐	☐	PSYCHIATRIC/MENTAL HEALTH
☐	☐	SCHOOL HEALTH
☐	☐	WOMEN'S HEALTH CARE
☐	☐	OTHER: _____

23. Approximately what **percent** of your patients are adult females **over 18** years of age? _____%

24. Are you currently licensed/certified as a CAM provider?
    - ☐ NO. **SKIP TO QUESTION #27**
    - ☐ YES. You are currently licensed/certified as what type of CAM provider? (e.g., acupuncturist, naturopath).
      Please list: _____

25. How many **hours per week** to you practice as a CAM provider? _____HOURS

26. How would you **best** describe how you practice as a NP who is also a licensed/certified CAM provider? **Choose one.**
    - ☐ MOSTLY AS A NP
    - ☐ MOSTLY AS A NP WHO INTEGRATES CAM
    - ☐ MOSTLY AS A CAM PROVIDER

27. What is the geographic location of your current practice?
    - ☐ WITHIN OREGON ONLY.
    - ☐ OUTSIDE OF OREGON ONLY. PLEASE INDICATE WHAT STATE: _____
    - ☐ IN OREGON AND ANOTHER STATE. PLEASE INDICATE WHAT OTHER STATE: _____

28. Do you practice in a location within 60 miles of the Portland metropolitan area?
    - ☐ YES
    - ☐ NO

29. To provide information on the urban or rural setting of your practice, write in the **name of the county** in which you **primarily** practice:
    _____ **(county)**

30. Indicate the type of practice setting in which you **primarily** function as a NP.
    - ☐ OFFICE PRACTICE WITHOUT MD (INDICATE THE TYPE)
        - ☐ GROUP
        - ☐ INDEPENDENT
    - ☐ OFFICE PRACTICE WITH MD
    - ☐ COMMUNITY HEALTH
    - ☐ GOVERNMENT PROGRAM (i.e., INDIAN HEALTH/VA/PUBLIC HEALTH)
    - ☐ NURSING EDUCATION PROGRAM
    - ☐ STUDENT HEALTH SERVICE
    - ☐ OCCUPATIONAL HEALTH
    - ☐ CORRECTIONAL FACILITY
    - ☐ HOSPITAL (INPATIENT)
    - ☐ HOSPITAL (OUTPATIENT)
    - ☐ OTHER: _____

31. Is the practice setting in which you **primarily** function a managed care setting? (i.e., Kaiser, Blue Cross)
    - ☐ YES
    - ☐ NO

32. Anything else that would help understanding how your personal or professional experience has influenced your use/nonuse of CAM with your female patients may be added here.

PLEASE RETURN THIS SURVEY REGARDLESS OF HOW MANY QUESTIONS APPLY TO YOUR PRACTICE.

APPENDIX F

IRB APPROVAL FOR THE SURVEY RESEARCH

(Protocol Addendum)

OREGON HEALTH SCIENCES UNIVERSITY
Research Support Office (Compliance & Assurance), L106 (503) 494-7887

MEMO

Date: April 19, 2000

To: *Polly Kloster, RN, MS, SON-SS* c/o Mary Ann Curry

From: Gary T. Chiodo, DMD, Chair, Institutional Review Board, L106
Leslie Bevan, PhD, Director, Compliance & Assurance, L106

Subject: ***5235 EX***
Integrative Therapies and Women's Health: Attitudes, Beliefs, Knowledge, and Use Among Health Care Providers

Project Revision Amendment (PRAF) Communication

RE: Protocol Amendment & Revised Consent Form

THE APPROVAL DATE FOR THIS EXEMPT STUDY IS 11/24/98

[■] Your PRAF dated 4/17/00 was reviewed and administratively approved by the IRB Chair on 4/19/00.

[ ] Your PRAF dated _____ was approved by a full board IRB review on _____.

[ ] Your PRAF dated _____ requesting that the above study be:

[ ] closed to subject accrual
[ ] terminated

was reviewed by the IRB and administratively approved by the IRB Chair on _____.

[ ] Your PRAF dated _____ did not include a summary of the protocol revisions/changes. This material is necessary for IRB review and approval. This material is due to the RSO by _____.

[ ] Your PRAF dated _____ was reviewed by the IRB Chair on _____. It will be approved by the IRB upon completion and approval of the recommended changes/revisions (see attached) [1]. The changes are due to by_____.

[1] see attached IRB REVIEW SUMMARY

APPENDIX G

SURVEY COVER LETTER

(Initial Mailing)

April 24, 2000
7640 SW Leslie St.
Portland, OR 97223

Dear Nurse Practitioner:

I am a doctoral candidate in nursing at Oregon Health Sciences University in Portland, Oregon. I am writing to invite you to participate in my dissertation research on, "Nurse Practitioners' Use of Complementary Therapies for Women's Health". The purpose of this study is to learn more about nurse practitioners' (NPs) attitudes, beliefs and knowledge about and communication and use of complementary therapies for themselves and their female patients. You have been selected to participate because your NP scope of practice is likely to include women patients. If you ***DO NOT*** provide any health care to women in your current practice, ***please return the uncompleted survey in the envelope provided.*** This is very important for me to know in order to calculate the return rate.

If you ***DO*** provide health care to women in your practice, please take the 15 minutes needed to complete the survey. The Tazo Tea Company in Portland has provided an herbal tea bag for you to use as you relax and complete the survey. An information sheet regarding your rights as a study participant is enclosed for you to keep. There are no known risks to your participation. Completing and returning the survey in the enclosed envelope implies your consent to participate. If you would like a copy of the final results, please complete and separately return the postcard included in this mailing.

You will notice the acronym "CAM" (complementary/alternative medicine) is used in the survey. It was selected for brevity only and is not intended to exclude other definitions that you or others may use, such as integrative health care.

Your participation in this study is very important. This is the first study anywhere that is focusing on the use of CAM by NPs. You will be providing extremely important information for nursing and women's health. If you have any questions about the survey, please call me at (503) 452-1329. You can also e-mail me at: pollykloster@earthlink.net.

Thank you!

Polly K. Kloster, RN, MS, PhD Candidate
School of Nursing, OHSU

PLEASE RETURN BY WEDNESDAY, MAY 10, 2000

APPENDIX H

OREGON HEALTH SCIENCES UNIVERSITY

Information Sheet

IRB #: 5235 EX
Approval Date: 4/19/00

OREGON HEALTH SCIENCES UNIVERSITY

Information Sheet

TITLE: Nurse Practitioners' Use of Complementary Therapies for Women's Health.

PRINCIPLE INVESTIGATOR: Polly K. Kloster, RN, MS, Doctoral Candidate, School of Nursing, Oregon Health Sciences University, (503) 452-1329.

PURPOSE:

You have been invited to participate in this research study because you are a licensed nurse practitioner who provides health care to women in Oregon. The purpose of this study is to assess nurse practitioners' attitudes/beliefs and communication about complementary/alternative medicine (CAM) and knowledge and use of CAM for women's health.

PROCEDURES:

You are asked only to complete the questionnaire provided. A self-addressed, postage-paid envelope is provided to return your completed questionnaire. In addition, a postage-paid postcard is included for you to return separately if you are interested in receiving results of the study, regardless of your participation.

RISK AND DISCOMFORTS:

The questionnaire will require about 15 minutes for you to complete. It is not anticipated there will be any risks or discomforts to you either during or as a result your participation. Your responses will remain completely confidential and anonymous.

BENEFITS:

You may or may not personally benefit from participating in this study. However, by serving as a subject, you may contribute new information that could be of future benefit to nurse practitioners who provide health care to women and to the women for whom they provide care.

ALTERNATIVES:

You may choose not to participate in this study.

CONFIDENTIALITY:

Neither your name nor your identify will be used for publication or publicity purposes. The questionnaires are coded only for purposes of determining response rates. All participant names and addresses are kept in a separate, locked file cabinet from the returned, coded questionnaires. These are accessible only by the Principal Investigator. All data will be reported in aggregate form to assure that your responses remain completely confidential and anonymous.

COSTS:

There will be no cost to you for participating in this study aside from the time you volunteer to complete the questionnaire.

LIABILITY:

The Oregon Health Science University is subject to the Oregon Tort Claims Act (ORS 30.260 through 30.300). If you suffer any injury and damage from this research project through the fault of the University, its officers or employees, you have the right to bring legal action against the University to recover the damage done to you subject to the limitations and conditions of the Oregon Tort Claims Act. You have not waived your legal rights by participating in this study. For clarification on this subject, or if you have further questions, please call the Medical Services Director at (503) 494-6020.

PARTICIPATION:

Polly K. Kloster, RN, MS, Doctoral Candidate, (503) 452-1329 has offered to answer any other questions you may have about this study. In addition, Mary Ann Curry, RN, DNSc, Professor, School of Nursing, Oregon Health Sciences University, (503) 494-3847 has also offered to answer any questions you may have about this study. If you have any questions regarding your rights as a research subject, you may contact the Oregon Health Sciences University Institutional Review Board at (503) 494-7887. You may refuse to participate, or you may withdraw from this study at any time without affecting your relationship with or treatment at the Oregon Health Sciences University.

Your completion and return of the questionnaire indicates that you have read the foregoing and consent to participate in this study. You are to keep this information sheet for your own records.

APPENDIX I

SURVEY COVER LETTER

(Final/Follow-Up Mailing)

May 15, 2000
7640 SW Leslie St.
Portland, OR 97223

Dear Nurse Practitioner:

I am a doctoral candidate in nursing at Oregon Health Sciences University in Portland. About three weeks ago, I invited you to participate in my dissertation research on, "Nurse Practitioners' Use of Complementary Therapies for Women's Health". The purpose of the study is to learn more about nurse practitioners' (NPs) attitudes, beliefs and knowledge about and communication and use of complementary therapies for themselves and their female patients. I am sending you a second copy of my questionnaire to encourage you to participate.

You have been selected to participate because your NP scope of practice is likely to include women patients. If you ***DO NOT*** provide any health care to women in your current practice, ***please return the uncompleted questionnaire in the envelope provided.*** This is very important for me to know in order to calculate the return rate. ***If you have already completed and mailed your questionnaire, discard this one.*** Thank you for taking part in this study. If you did not complete the questionnaire, please take the fifteen minutes needed to participate by filling out and returning your questionnaire in the enclosed postage paid envelope. The Tazo Tea Company in Portland has provided an herbal tea bag for you to use as you relax and complete the questionnaire.

You will notice the acronym "CAM" (complementary/alternative medicine) is used throughout the questionnaire. It was selected for brevity only and is not intended to exclude other definitions that you or others may use, such as integrative health care.

Your participation in this study is very important. This is the first study anywhere that is focusing on the use of CAM by NPs. You will be providing extremely important information for nursing and women's health. An information sheet regarding your rights as a study participant is enclosed for you to keep. There are no known risks to your participation. Completing and returning the questionnaire implies your consent to participate. If you have any questions about the survey, please call me at (503) 452-1329. You can also e-mail me at: pollykloster@earthlink.net.

Thank you!

Polly K. Kloster, RN, MS, PhD Candidate
School of Nursing, OHSU

PLEASE RETURN BY FRIDAY, MAY 31, 2000

APPENDIX J

Most Common Women's Health Conditions For Which NPs Use CAM

Table J-1

Most Common Women's Health Conditions for Which NPs Use CAM

Women's Health Condition (Total frequency of use of all 9 types of CAM used)	The Three Most Common Types of CAM Used (Frequency of NPs' use)		
	1st	2nd	3rd
Chronic Pain (1223)	Massage, reflexology (200)	Manipulative therapies (177)	Chinese Medicine (81)
Musculoskeletal/ Joint Problems (1013)	Manipulative therapies (251)	Massage, reflexology (213)	Naturopathy/Supplements (138)
Headaches/Migraines (1004)	Massage, reflexology (163)	Naturopathy/Supplements; Chinese Medicine (143)	Guided imagery, etc. (139)
Mental Health, Stress, Anxiety, Depression (988)	Naturopathy/Supplements (216)	Guided imagery, etc. (214)	Massage, reflexology (143)
Wellness, Health Promotion (909)	Naturopathy/Supplements (232)	Movement therapy (141)	Massage, reflexology (135)
Sleep Disorders (776)	Naturopathy/Supplements (200)	Guided imagery, etc. (170)	Massage, reflexology (102)
Perimenopause, Menopause (721)	Naturopathy/Supplements (279)	Guided imagery, etc. (94)	Chinese medicine (93)
Fatigue (654)	Naturopathy/Supplements (179)	Guided imagery, etc. (88)	Movement therapy (85)
Pregnancy, Prenatal Symptoms (651)	Naturopathy/Supplements (164)	Guided imagery, etc. (116)	Massage, reflexology (100)
Menstrual Disorders (524)	Naturopathy/Supplements (225)	Chinese medicine (90)	Guided imagery, visualization, meditation, relaxation (45)
Digestive Disorders (477)	Naturopathy/Supplements (118)	Chinese medicine (93)	Homeopathy (50)
Weight Control (451)	Naturopathy/Supplements (144)	Guided imagery, visualization, meditation, relaxation (77)	Movement therapy (62)
Vaginal Infections (289)	Naturopathy/Supplements (194)	Homeopathy (29)	Chinese medicine (19)

(table continues)

Women's Health Condition (Total frequency of use of all 9 types of CAM used)	The Three Most Common Types of CAM Used (Frequency of NPs' use)		
	1st	2nd	3rd
Stress/Urinary Incontinence (269)	Biofeedback (81)	Naturopathy/Supplements (65)	Chinese medicine (27)
Breast Tenderness (245)	Naturopathy/Supplements (51)	Chinese medicine (25)	Guided imagery, etc. (20)
Urinary Tract Infections (241)	Naturopathy/Supplements (145)	Homeopathy (32)	Chinese medicine (16)

Note. Reported in descending order of frequency based on total number of NPs recommending, referring, and providing all nine types of CAM. The three most prevalent types of CAM used for each condition and the frequencies of use are cited in parenthesis. The frequency represents the number of times that specific type of CAM was recommended, referred and provided by the respondents for the specific health condition.

APPENDIX K

Relationship of NPs' Attitudes/Beliefs About CAM Use for Patients Who Initiate CAM Discussion

Table K-1

Relationship of NPs' Attitudes/Beliefs About CAM Use for Patients Who Initiate CAM Discussion

NPs' Attitudes/Beliefs About the Use of CAM	Who Initiates Discussion About CAM								Statistics		
	NP		Patient		Both		Neither				
	n	%	n	%	n	%	n	%	x^2	df	N
CAM is within your personal practice philosophy.	57	23.0	54	21.8	136	54.8	1	.4	35.591***	3	248
Use of CAM is within NP scope of practice.	56	22.0	62	24.4	132	52.0	4	1.6	NS		
CAM enhances practice options.	56	21.3	63	24.0	141	53.6	3	1.1	15.651**	3	263
CAM is beneficial/useful to patients.	54	21.6	56	22.4	139	55.6	1	.4	28.676***	3	250
Patients request CAM.	47	19.0	61	24.6	139	56.0	1	.4	34.408***	3	248
Concerned about interactions of CAM and allopathic treatments.	40	19.1	59	28.2	106	50.7	4	1.9	NS		
CAM is readily accessible/available.	39	22.9	42	24.7	89	52.4	0	.0	NS		
CAM referrals and/or practice are readily encouraged in your practice setting.	34	30.6	20	18.0	56	50.5	1	.9	13.678*	6	111
Feel well-trained, knowledgeable in CAM.	22	33.8	2	3.1	41	63.1	0	.0	27.176***	3	65
Afraid of personal liability for promoting/supporting CAM in your practice.	16	19.8	27	33.3	36	44.4	2	2.5	NS		
CAM is reimbursed and/or relatively inexpensive.	11	20.0	12	21.8	31	56.4	1	1.8	NS		
Afraid of jeopardizing your license to practice as an NP if you use CAM in your practice.	9	17.0	19	35.8	24	45.3	1	1.9	NS		

Note. n and percents correspond to "yes" responses to the attitudes/beliefs statements.

NS = nonsignificant. *$p < .05$. **$p < .01$. ***$p < .001$.