

Effectiveness of CancerGuides[®]: A Study of an Integrative Cancer Care Training Program for Health Professionals

Julie K. Staples, Ph.D.
The Center for Mind-Body Medicine
5225 Connecticut Avenue, NW, Suite 414
Washington, DC 20015
Telephone: 703-861-2322
Fax: 540-349-8371

Amy T. Wilson, Ph.D.
Gallaudet University
Department of Educational Foundations and Research
800 Florida Avenue, NE
Washington, DC 20002
Telephone: 202-651-5201
Fax: 202-651-5710

Beverly Pierce, MLS, MA, RN, CHTP
(formerly with the Center for Mind-Body Medicine)
4201 Cathedral Avenue NW
Washington, DC 20016
Telephone: 202-537-5986

James S. Gordon, MD (Corresponding Author)
The Center for Mind-Body Medicine
5225 Connecticut Avenue, NW, Suite 414
Washington, DC 20015
Telephone: 202-537-6837
Fax: 202-363-7247
jgordon@cmbm.org

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ABSTRACT:

Objective: The purpose of this study was to determine how CancerGuides[®], an integrative cancer care training program, would affect participants' perception of their professional skills, their mood, use of self-care and mind-body modalities, and the acceptance of integrative cancer care at their institutions.

Study Design: Both qualitative and quantitative measures were used during the training program and at 6-month follow-up. A focus group met before and after the training, and individual interviews of focus group participants were done at follow-up.

Methods: The week-long program consisted of lectures that provided information on integrating conventional and complementary therapies into individualized programs of cancer care. Small group sessions used mind-body techniques to allow participants to understand the dilemmas faced by cancer patients. A self-report survey was administered at the training program and at 6-month follow-up. The survey included questions on the personal and professional use of modalities and on participants' sense of how well they met the course objectives. Qualitative questions addressed self-care, changes in clinical practice, and the acceptance of integrative therapies by their institutions. The Profile of Mood States (POMS) was administered before and after the training.

Results: Six months after the training there was a significant increase in the use and/or recommendation of complementary and alternative medicine (CAM) modalities in clinical practice and a significant increase in the personal practice of these modalities. Participants' perceived level of skill for all of the course objectives was significantly increased following the training and was maintained at 6-month follow-up. There were significant reductions in the Anger-Hostility and Tension-Anxiety subscale scores of the POMS questionnaire. In response to

qualitative questions, participants reported positive changes in patient care and in their clinical practices at 6-month follow-up. The subset of participants in the focus group interviews reported similar improvements. Thirty-five percent of those responding at follow-up reported an increase in acceptance of integrative cancer therapies at their institutions and 77% reported making positive changes in self-care.

Conclusion: CancerGuides® provided training which allowed participants to enhance personal self-care, to interact more effectively with their patients, and to develop programs of integrative cancer care.

Key Words: complementary therapies, integrative medicine, mind-body medicine, cancer, continuing education, integrative cancer care

INTRODUCTION:

Complementary and alternative medicine (CAM) therapies are widely used among people with cancer. In a survey of cancer patients from 17 Community Clinical Oncology Program affiliates throughout the United States, 91% reported using at least one form of CAM ¹. This study included prayer as a CAM therapy. When spiritual practices were excluded in another study of cancer patients at M.D. Anderson Cancer Center, the use of CAM was 69% ². These studies included both CAM modalities which required a provider (i.e. massage and chiropractic) and CAM modalities which could be practiced independently (i.e. vitamin supplementation or yoga). In a telephone survey of California adults which specifically asked about visits to CAM providers, 27% of cancer patients reported seeing CAM providers including chiropractors, massage therapists, and acupuncturists ³.

While CAM courses are beginning to be incorporated into medical school curricula and some family medicine residency programs, there is little guidance for oncology and other health professionals who want to help their patients integrate CAM into treatment programs. Sources for CAM information are numerous and include conventional biomedical and CAM journals; Internet sources including academic, government, commercial, and professional society-sponsored resources; databases; and newsletters ⁴. Sorting through the available information can be a daunting task for health care professionals, especially with the time constraints faced by many practitioners. There is therefore a need to bring this information to them, so that they can help their patients make informed decisions.

Health care professionals involved in integrative cancer care also need knowledge about, and experience of, the effectiveness of mind-body therapies in helping cancer patients to cope with the mental, emotional, and spiritual aspects of the disease. This is best accomplished by

including an experiential as well as a didactic component in this training. A study on the effectiveness of continuing medical education on conventional medical topics showed that interactive and mixed educational sessions had significant impact on physician performance and were significantly more effective than didactic sessions alone ⁵. Mind-body experiential exercises also have the advantage of increasing self-awareness and enhancing self-care. The importance of physician self-awareness and self-care is widely acknowledged in the medical literature, and in 1997 a special communication describing an educational program and organized activities for physician personal awareness was published in JAMA ⁶.

The Center for Mind-Body Medicine's (CMBM) CancerGuides[®] training program consists of didactic sessions to provide health care professionals with up-to-date information on integrating CAM into treatment programs, and experiential sessions to give them a personal understanding of the effectiveness of mind-body techniques and to enhance their awareness of the problems their patients face as well as their own self-awareness.

The purpose of this study was to determine how the CancerGuides[®] training program would affect participants' mood and self-care, and whether participation in the program would enhance their sense of professional competence and result in changes in attitudes about integrative cancer care at their institutions.

METHODS:

Participants:

One hundred sixty-two health care practitioners participated in the 2004 CancerGuides[®] program. One hundred and fifty-four filled out pre-training questionnaires, 126 filled out the post-training questionnaires, and 71 responded to the 6-month follow-up. The professional

breakdown for those responding to the follow-up was as follows: 23 nurses (32%) (including 11 oncology nurses); 15 physicians (21%) (including 5 oncologists); 7 social workers (10%); 6 counselors (8%); 4 dietitians/nutritionists (6%); 2 educators (3%), 2 patient advocates (3%), 2 students (3%), and 10 other (14%). There were 62 women and 9 men. Fifty-five (77%) reported having a clinical practice. Seventeen (24%) were in professional practice for less than 5 years; 9 (13%) were in practice 5-10 years; 14 (20%) were in practice 11-15 years; 11 (15%) were in practice 16-20 years; and 20 (28%) were in practice over 20 years.

There were 8 volunteer focus group participants: 1 man and 7 women. Their professions were as follows: 2 physicians (an oncologist and a holistic family practice physician), 2 social workers, a nurse, a women's health nurse practitioner, a Traditional Chinese Medicine practitioner, and a dietitian.

Program:

CancerGuides[®] was first held in 2001. The 2004 program was the third time the program had been offered. CancerGuides[®] was developed as a comprehensive training program in integrative oncology to teach health care professionals how to work collaboratively with people with cancer to create individualized programs of comprehensive care. There were 22 faculty and 2 guest speakers--specialists and leaders in integrative oncology with a broad range of expertise, including physicians, nurses, and social workers. Fourteen of the faculty served as small group leaders for the experiential sessions. The 7-day program consisted of 41 hours of training. Yoga was offered as an optional activity every morning.

Each day began with a 15-minute opening meditation. Twenty-two didactic hours included the following topics: dealing with the cancer diagnosis; the biology of cancer and conventional treatment; psychobiology of cancer and psychoneuroimmunology; creating a

healing team and making choices for integrative care; integrative oncology for breast and prostate cancer; cutting-edge conventional therapies; and death and dying. There were also lectures on creating a program of integrative care that discussed and evaluated the efficacy of the following modalities: mind-body medicine; nutrition, supplements, and antioxidants; exercise and massage; Healing Touch and energy medicine; and Chinese medicine. In order to help participants find and assess the scientific literature, two lectures were given on literature searches and how to evaluate the literature. Five hours of panel discussion included models of cancer guides; financing a cancer guides practice and CAM services; coping with conventional care and its side effects; and recurrences.

There were six 2-hour small group sessions which included experiential exercises using mind-body techniques such as meditation, imagery, breathing exercises, and written exercises and drawings. These exercises and group interactions were designed to allow participants to experience and understand the dilemmas and choices that cancer patients and their families face during diagnosis and treatment. The areas explored in the small groups included: thoughts and feelings about cancer; beginning treatment, making choices, and finding healing partners; dealing with the psychological, physical, and spiritual consequences of cancer and cancer care; dealing with recurrence; and death and dying.

Measures:

The study was conducted using a coding system to maintain anonymity. Index cards with unique numbers were handed out to participants at the beginning of the training and they were asked to write this number on the inside of their course notebooks and to use it as their identifier on their questionnaires. Before answering the post-training questionnaires, participants were given two blank index cards and two envelopes. They were asked to write their assigned number

on each card and to place the index card in the sealed envelopes with their name on the outside. At six-month follow-up, the envelope with the code number was mailed to each participant along with the follow-up questionnaire and a self-addressed envelope for the return mailing. A letter with instructions was included asking them to write the code number located in the sealed envelope on the questionnaire before returning it. A few weeks later, a duplicate reminder packet was sent which included the second code envelope. Alternatively, there was the option to answer the follow-up survey electronically using the participant's code number. The questionnaire was posted on the CMBM website using Perseus Survey Solutions version 6.0⁷. Completed electronic questionnaires had no identifying information except the code numbers provided by the participants.

Informed consent for participation in the study and permission to tape record the focus groups and follow-up interviews was obtained from the participants. The protocol was approved by Gallaudet University institutional review board.

General Survey:

The pre-training survey gathered information about participants' professional practices. Both the pre-training and follow-up questionnaires asked about personal and professional use of CAM and mind-body modalities. Participants were asked whether they had personally used any of a list of various modalities within the last three months. For the professional use of modalities, four choices for each modality were as follows (1) incorporate; (2) refer; (3) incorporate and refer; or (4) neither incorporate nor refer. Qualitative questions were asked both pre-training and at follow-up related to self-care, patient care, changes in clinical practice, and acceptance of integrative therapies by their institutions. Participants were asked to rate their perceived skill

levels, in terms of the course objectives, in the pre- and post-training, and follow-up questionnaires.

Profile of Mood States:

The Profile of Mood States (POMS) short form was administered before and after the training in order to determine changes of mood during the course of the week. The POMS short form lists 30 adjectives that are rated on a 5-point scale ranging from “not at all” to “extremely”⁸. Respondents are asked how they have been feeling “during the past week, including today.” Scoring includes the following six subscales: Tension-Anxiety; Depression-Dejection; Anger-Hostility; Vigor-Activity; Fatigue-Inertia; and Confusion-Bewilderment. The subscale scores and total mood disturbance on the POMS short form correlate well with the full length POMS ($r > .95$), and the POMS short form has acceptable reliability^{9,10}. In this study, Cronbach’s alpha coefficient of internal consistency was .84 and .90 on the pre- and post-questionnaires, respectively.

Focus Groups:

An effective method for eliciting data related to attitudes and experiences is to utilize focus groups and the interactions that occur during these discussions¹¹. Therefore, focus groups were used in order to explore more thoroughly the attitudes of cancer care providers and to determine how participation in CancerGuides[®] may have affected these attitudes. Focus group volunteers were asked to submit their names and kinds clinical practice on a piece of paper. Almost all CancerGuides[®] participants volunteered.

In order to have a balance of types of clinical practice represented in the focus group, the submitted names were divided into 4 categories: nurses, physicians, psychologists/social workers, and CAM practitioners/other. The names in each category were blindly shuffled, and 2

names were drawn from each category. The 8-person focus group was interviewed for 1 hour before and after the training. Six months after CancerGuides[®], 7 of the 8 original participants were interviewed individually by telephone. The focus group sessions and telephone interviews were tape recorded and transcribed.

Analysis:

Analysis of Qualitative Data:

The transcribed data from the focus groups and the written answers on the general survey were analyzed according the principles of grounded theory¹² using ATLAS.ti version 4.1 software¹³. Individual questions were coded and were then organized into broader categories and themes. For the questions on the general survey about attitudes toward patient care and acceptance of integrative therapies by the institutions, it was of interest to directly compare changes in response from the pre-training to the 6-month follow-up. In order to make sure that the responses being compared for these 2 questions were from the same group of people, the coded pre-training questionnaires were paired with 6-month follow-up questionnaires, and only matched answers from people who had answered this question both pre-training and follow-up were used for analysis. For the question on changes in clinical practice since attending the training, all follow-up responses were included in the analysis.

Statistical Analysis:

The responses to the personal and professional practice of modalities were dichotomous (yes/no) so the McNemar test was used to analyze the pre-training and follow-up results. The POMS subscale data and the course objectives data for perceived skills were tested for normality using the Kolmogorov-Smirnov test with Lilliefors significance correction. Because the data was not normally distributed, nonparametric statistics were applied. The Wilcoxon signed ranks test

was used to compare the matched pre-and post-POMS scores. The pre-, post-, and follow-up perceived skill questions based on course objectives were analyzed using the Friedman test. Pairwise differences were measured using the Wilcoxon signed ranks test with Bonferroni correction. The adjusted alpha was $\alpha = .05/3 = .17$. The chi-square test was used to determine differences between the responders and non-responders to the follow-up questionnaire. SPSS for Windows version 14.0.1¹⁴ and Statview for Windows version 4.53¹⁵ were used for statistical analyses.

RESULTS:

Personal Use of Modalities: Personal use of mind-body modalities prior to participation in the training was high, with more than 70% using relaxation techniques, exercise and movement, meditation, and massage in the 3 months prior to the training (Table 1). Six months after the training there was a significant increase in the use of imagery, relaxation, and Tai Chi or Qi Gong.

Professional Use of Modalities: For analysis of the professional use of modalities, the “incorporate,” “refer,” and “incorporate and refer” categories were combined to reflect the overall number of participants who were both using and recommending various modalities to their clients/patients (Table 1). As with the personal modalities, many of the participants were using or recommending these techniques prior to attending the training. More than 80% of the participants were using or recommending massage, nutritional programs, exercise, relaxation techniques, meditation, acupuncture, and yoga. Six months after the training, there was a significant increase in the use and/or recommendation of relaxation techniques, meditation, imagery, sound/music, and “other energy” techniques (Jin Shin Jyutsu[®], Craniosacral, Polarity and BodyTalk therapies, acupressure, the Rosen and Trager[®] methods, and tuning fork sound

therapy) with 98-100% using or recommending meditation, imagery, and relaxation techniques. There was also a significant increase in acupuncture referrals (70% to 85%, $P = .04$), though the overall use was not significantly increased when the incorporate and refer categories were combined.

Perceived Skills According to Course Objectives: Changes in how participants perceived their level of skill based on the course objectives were measured over time for the pre- and post-training and 6-month follow-up. There was a significant increase in perceived level of skill for all of the objectives that was maintained at 6-month follow-up (Table 2). These skills included developing individualized programs of cancer care, evaluation of the scientific literature, referral of clients, counseling patients, and dealing with cancer diagnosis, side effects of treatment, recurrence, and dying.

Changes in Mood States:

In order to compare the change in mood states with other changes seen during and after the program, only participants who completed the 6-month follow-up are included in the analysis of the POMS questionnaire. In this way all of the reported results are from the same subset of participants. Scores for both the Anger-Hostility and Tension-Anxiety subscales were significantly decreased following the training. There were no significant changes in any of the other subscales (Table 3). Though not shown, the results from all of the participants answering the POMS pre- and post-training were similar to this follow-up subset, with significant decreases only in the Anger-Hostility and Tension-Anxiety subscales.

Determining Nonresponse Bias:

There were 162 total participants in the training, and 154 (95%) answered the pre-training questionnaires. Of these 154 study participants, only 117 turned in envelopes at the end of the

training with their name and code number to be used in the follow-up mailing. Even though 71 of the 117 (61%) responded to the follow-up, this represents only 46% of the original 154 participating in the study. To determine whether there were differences between those who responded and did not respond to the 6-month follow-up, professional categories, number of years in their profession, and gender of the original 154 participants were compared between these two groups.

Four main professional categories were used: nurses, physicians, social workers, and others. The “others” category consisted of all the other professions which had less than 7 people (less than 10%). The breakdown was as follows: Responders (32% nurses, 21% physicians, 10% social workers, and 37% others); Nonresponders (16% nurses, 28% physicians, 14% social workers, and 42% others). While there was a trend toward more nurses and fewer physicians answering the follow-up, these differences were not statistically significant ($\chi^2_3 = 6.1, P = .10$). The breakdown for years in practice was as follows: Responders (24% less than 5 years, 13% 5 to 10 years, 20% 11 to 15 years, 15% 16 to 20 years, 28% more than 20 years); Nonresponders (13% less than 5 years, 24% 5 to 10 years, 17% 11 to 15 years, 11% 16 to 20 years, 34% more than 20 years) (not 100% due to rounding). There was no statistical difference in the years in practice ($\chi^2_4 = 6.2, P = .18$), though the trend was for more of those in practice less than 5 years to respond and less of those in practice 5-10 years to respond. Finally, there was no significant difference in the gender of those responding ($\chi^2_1 = .15, P = .70$) (Responders: 87% female, 13% male; Nonresponders: 85% female, 15% male).

Qualitative Questions:

Patient Care:

When participants were asked how they felt about the care they give their patients, nearly all of them were satisfied with the level of care. In their own words, more than half reported that it was “good,” “very good,” “excellent,” and that they are “satisfied with,” “proud of, ” or “feel great about” the care. However, they also wrote about problems and concerns. Several felt that they were not supported by their institution or medical community, offering statements such as:

“I reflect on my recent past position and I see that I was not allowed to treat my patients with all that was available. Who knows, if I was allowed to use CAM perhaps some of them would have lived longer, certainly they would have felt better going through treatment.”

A recurring theme was that participants wanted to offer more options. Some mentioned a lack of time as being a drawback. A few reported that they needed more confidence in their command of information about the variety of CAM therapies so that they could offer more to patients. Finally, several said they wanted more knowledge about integrative therapies for oncology care or that they were striving to improve their knowledge and were committed to ongoing study.

At 6-month follow-up, participants were asked to explain if and how the way they feel about the care they give their clients/patients had changed since attending CancerGuides®. In matched responses from the same participants who answered the question before the training, 78% reported a positive change. These changes fell into five main categories: (1) enhanced skills; (2) increased confidence and comfort level in discussing integrative treatments and offering options; (3) better listening and patient interaction; (4) personal changes that affected their practice; and (5) better referrals and resources. Examples of quotes from each category are given in Table 4.

Changes to Clinical Practice:

At the 6-month follow-up, participants were asked “What changes, if any have you made to your clinical practice as a result of attending CancerGuides®?” Fifty-five of the people responding to the follow-up reported having a clinical practice, and 51 responded to this question. Ninety percent of those responding said that they had made changes in their clinical practice. These changes included providing additional programs and services; having an increased confidence and comfort level, especially in the area of discussing death and dying; making more CAM-related referrals; having improved skills; experiencing better interaction with patients, including improved listening; having more discussions with patients on integrative care; and offering increased nutritional guidance and incorporation and recommendation of supplements. See Table 5 for examples in each category.

Acceptance of Integrative Cancer Therapies by Their Institutions:

This question was given in a qualitative format in the pre-training questionnaire, asking participants to comment on how integrative cancer therapies were currently accepted by their institution. At follow-up, participants were asked if there had been any change in the way these therapies were accepted in the 6 months since CancerGuides®.

The pre-training comments were widely varied, depending on the institution. In order to determine the changes at 6-month follow-up, the matched responses of the individuals from the pre-training and follow-up were coded according to the following categories: accepted, somewhat accepted, not accepted, or not applicable. Each matched participant response was analyzed individually to determine the extent of change, and the overall changes were calculated.

There were 49 matched responses. Eight were “not applicable,” so 41 responses were analyzed. Fifty-one percent said that integrative cancer therapies were already accepted or somewhat accepted prior to attending the training. At the 6-month follow-up, 35% reported an

increase in acceptance, 10% reported that integrative cancer therapies still were not accepted, and 5% reported a decrease in acceptance.

Changes in Self-Care:

In order to gather additional information on the use of modalities and methods of self-care, the following question was asked on the follow-up questionnaire: “Since attending CancerGuides[®] have you changed your methods or frequency of self-care? Please explain.” Seventy-seven percent of the 69 responding had made positive changes in self-care. Many participants who had regular meditation, exercise, and yoga practices reported increased or daily use of these techniques (15 of 18 participants for meditation; 13 of 14 for exercise; and 10 of 13 for yoga). Other participants reported practicing new self-care techniques, with 19% saying they felt they had a better diet, were taking supplements, and eating more organic and whole foods. Twenty-six percent reported that they were using imagery, relaxation, massage, or Tai Chi/Qi Gong and 13% specifically reported having increased self-awareness. Finally, 29% reported using a combination of other methods of self-care including journaling, breathing exercises, dancing, drumming, acupuncture, and attending spiritual workshops.

Focus Groups:

Patient Care:

Focus group members were asked before the training how they felt about the care they gave their patients. The themes that emerged were similar to those in the qualitative written question answered by CancerGuides[®] participants as a whole. The focus group felt that the care was good, but that the spiritual, emotional, and nutritional aspects were poor. There was a sense of frustration in not knowing how to get reliable information. At follow-up, the focus group participants reported that their confidence level in counseling in integrative cancer therapies was

increased, their awareness of the need to deal with the spiritual aspect was heightened “tremendously,” and they were more positive about the services they offered.

Psychological and Spiritual Support:

At the beginning of the training, focus group members were asked whether they and their colleagues at their institution made an effort to meet patients’ needs for psychological and spiritual support and whether these efforts were actually meeting their needs. Only one person reported that she offered psychological and spiritual support, but that on a scale of 1 to 10 she felt she and her colleagues met needs at about a “4.” Another participant said that there was no psychological or spiritual support at her institution because there was not adequate staffing. She added that even if there were enough staff, it would be a challenge for her cancer center, which offers treatment to a large rural area through outpatient services.

At follow-up, 2 focus group participants reported that they felt that the training helped remind them, and gave them the permission they needed, to focus on spiritual support for their patients. Another participant said that the training had helped her confirm that she is “on the right track” with the psychological support that her organization offers. Finally, one participant reported progress in this area had been made in his division. He believed what he conveyed to his colleagues as a result of his CancerGuides[®] experience had made them more aware of the necessity for a focus on psychological and spiritual support.

Discussing CAM therapies:

At the beginning of the training, the focus group was asked whether they discuss CAM therapies with their patients, when these conversations occurred in the course of treatment, and how they felt about this dialog. As might be expected, all participants were comfortable talking about CAM. Half of those who responded said that they asked about the use of CAM therapies

when taking a history. The other half said they talked about CAM after conventional treatment or during recovery.

Six months later, the focus group participants had very positive things to say regarding their feelings on talking about CAM. One woman with a rural practice said she is much more comfortable talking about CAM, even though it is difficult because her patients are resistant to it. She now felt able to assess her patient's opinions on CAM and to talk openly with them. Another participant said that she felt more comfortable because she now could substantiate with research on CAM what she always believed was important. One of the participants said that the CancerGuides[®] training gave him much more confidence in talking with the physicians around him about CAM. He also felt that they were more open to these discussions. Another participant said that before the training, she would not discuss CAM unless a patient indicated some interest. Now she feels she has the skill to bring up the topic in an appropriate way.

DISCUSSION:

The results of this study showed that attending the CancerGuides[®] training program had a positive effect on participants' estimate of their professional skills; that it increased both their professional and personal use of mind-body and CAM modalities; improved their self-care, and decreased their levels of anger and tension or anxiety. The effects on participants also seemed to extend to their institutions. An increased acceptance of integrative cancer care was noted at institutions where previously there had been resistance.

Qualitative responses support the quantitative data regarding participants' perceived increase in skill level for all of the course objectives, both immediately following the training and at 6-month follow-up. The main course objective was to provide training in developing programs of integrative cancer care. Participants reported enhanced skills in this area, and

increased confidence and comfort level in discussing integrative treatments and offering options. Several also reported at the follow-up that they were providing additional programs and services related to integrative cancer care. In addition, 98-100% of those answering the 6-month follow-up reporting using and/or recommending meditation, imagery, and relaxation techniques in their clinical practices, which was a significant increase, despite the high levels of use (80-86%) of these modalities before the training. Another course objective was to teach participants to refer their clients to appropriately trained and experienced CAM practitioners. Twenty-five percent of those reporting at follow-up fell into two categories: They were either more frequently referring to CAM providers and nutrition consultants, or they were sharing more resources with their patients.

Enhancing the participants' skill in counseling patients through cancer treatment was another goal of the training. Participants said that they felt they had better listening skills and interactions with their patients at the 6-month follow-up: This included their ability to do more thorough interviews, being more present with patients, and being more effective in understanding and meeting their patients' needs. In a previous study on patient-physician communication about CAM, 34% of the patients and 39% of the oncologists thought that discussing CAM enhanced the patient-physician relationship¹⁶. Therefore, we would expect that this improved quality of communication would be beneficial to both the practitioner and the patient.

It appears that this ease of communication extended to the important issue of death and dying. A significant goal of the training was to help practitioners feel more comfortable in addressing death and dying with cancer patients. In a qualitative follow-up question (asked of the whole group) about changes made in their clinical practices, half of those who mentioned

increased confidence and comfort levels with their patients specifically described their increased comfort in discussions on death and dying.

A question specifically discussed in the focus group interviews was the effect of the training on helping practitioners address the spiritual needs of patients. The focus group participants were asked how well they felt their patients' needs for spiritual support were being met during cancer care. In the follow-up interviews, participants said that CancerGuides[®] reinforced the necessity of focusing on spiritual issues and gave them the "permission" they needed to address these issues with their patients. This increased awareness of the importance of focusing on spiritual needs, and increased comfort in doing so, is especially important to patients. A previous study showed that the amount of time ideally spent on spiritual issues during consultation was ranked significantly less by the health care providers than by their patients, even though the health care providers recognized the importance of spiritual aspects of cancer care¹⁷. The increased comfort level of the practitioner in discussing spiritual issues, including death and dying, may help meet patients' need for spiritual support, and reverse the tendency to underestimate this aspect of cancer care.

The qualitative data supported and helped explain the quantitative data on mood changes occurring during the training, as measured by the POMS questionnaire. In our previous Mind-Body Medicine professional training programs, there have been significant improvements in the Depression-Dejection, Fatigue-Inertia, Anger-Hostility, and Tension-Anxiety POMS subscales (unpublished data). While it was expected that similar improvements would be measured on these subscales for the CancerGuides[®] participants, the only two showing significant improvement were Anger-Hostility and Tension-Anxiety.

The qualitative data suggest that improvement in the anger and anxiety subscales are the most relevant regarding the overall mood of participants who, prior to the training, reported being frustrated by their institutions; wanted to offer more options to their patients; felt a lack of time for patient care; and needed more information about integrative therapies. The reduction in the Anger-Hostility and Tension-Anxiety subscales may reveal a change in their level of frustration after the training, as well as a decrease in tension after practicing mind-body skills through the week.

There was a high level of personal use of mind-body and CAM modalities by CancerGuides[®] participants before the training. When compared to reported use by nurses and physicians in other studies, a larger percentage of these health care providers were using meditation, imagery, yoga, and acupuncture. The levels of personal use by CancerGuides[®] participants for imagery (69%), yoga (52%), and acupuncture (28%) were more than twice what has been previously reported (i.e. imagery 21-33%; yoga 11-21%; acupuncture 9-13%)¹⁸⁻²¹. Meditation use was also higher, at 77%, for CancerGuides[®] participants compared to 38-48% in the other studies.

Self-use of CAM therapies has been shown to be a predictor of the likelihood of a physician recommending CAM therapy: In one study, physicians who used 1 or more CAM modalities were 7 times more likely to recommend CAM to their patients²¹. Therefore, it is not surprising that more than 80% of participants were using and/or recommending massage, nutritional programs, exercise, relaxation techniques, meditation, acupuncture, and yoga to their patients prior to attending the training. These health care providers were already experiencing the benefits of these modalities, both personally and professionally, and were likely to attend a

training program to update their knowledge and to learn how to effectively integrate CAM into an cancer care program.

One of the messages of the CancerGuides[®] training is the importance of self-care. Attending the training resulted in increased self-awareness and a greater level of self-care for many participants responding to the follow-up. Enhanced self-care included increasing the frequency of established yoga, meditation, and exercise practices; improved diet and use of supplements; and the use of other techniques such as journaling, dancing, and drumming.

The final arena in which the training appeared to have an impact was at the institutional level. While integrative cancer therapies were already “accepted” or “somewhat accepted” at slightly over half of the participants’ institutions prior to their attending the training, 35% reported an increase in acceptance 6 months after the training. One explanation—sited specifically by one focus group participant—is that participants felt more confident and empowered in discussing integrative treatments with their colleagues and the decision-makers at their institutions, and that these discussions may have led to a change in the attitude at the institution.

The main limitation of this study was the low response rate of participants completing the 6-month follow-up compared to those answering the pre-training survey. The response (61%) to the mailed follow-up questionnaires was comparable to response rates reported for mail surveys published in medical journals where physicians and non-physicians had a mean response rates of 54% and 68%, respectively²². However, the follow-up only represented 46% of the CancerGuides[®] participants who completed the pre-training survey. Most of this loss was due to the inability to send questionnaires to 37 participants who did not submit envelopes with their anonymous code numbers for the follow-up mailing. These envelopes were collected in small

group sessions on the last afternoon of the training. It is likely that a number of these people left the training early and missed the final group.

In determining nonresponse bias, differences between the groups of responders and nonresponders in professional categories, years in profession, and gender, were not statistically significant. However, there may have been other differences between these groups that were not measured. It is possible that only those most enthusiastic about the training or those who were most fully incorporating the skills took the time to complete the follow-up, so the results of those responding cannot be extrapolated to those who did not respond.

CONCLUSIONS:

The CancerGuides[®] training presents a model for an integrative cancer care training program which consists of lectures, panel discussions, and experiential small groups focused on exploring the challenges of cancer care. The training provides scientific information on conventional and complementary therapies as well as guidance in dealing with the mental, emotional, and spiritual challenges faced by cancer patients and their families during diagnosis and treatment.

Qualitative and quantitative methods used to evaluate the effects of the training suggest that it was successful in helping physicians, nurses, and other health care providers to work with their patients to create individualized programs of comprehensive and integrative cancer care. The effects of the CancerGuides[®] program extended beyond the clinical practice of the individual participants and resulted in positive personal changes, as well as changes in attitude about integrative cancer therapy at the institutions where participants worked.

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REFERENCES

1. Yates JS, Mustian KM, Morrow GR, et al. Prevalence of complementary and alternative medicine use in cancer patients during treatment. *Support Care Cancer* 2005 Oct; 13(10):806-811.
2. Richardson MA, Sanders T, Palmer JL, Greisinger A, Singletary SE. Complementary/alternative medicine use in a comprehensive cancer center and the implications for oncology. *J Clin Oncol* 2000 Jul; 18(13):2505-2514.
3. Goldstein MS, Brown ER, Ballard-Barbash R, et al. The use of complementary and alternative medicine among California adults with and without cancer. *Evid Based Complement Alternat Med* 2005 Dec; 2(4):557-565.
4. Lee CO. Communicating facts and knowledge in cancer complementary and alternative medicine. *Semin Oncol Nurs* 2005 Aug; 21(3):201-214.
5. Davis D, O'Brien MA, Freemantle N, Wolf FM, Mazmanian P, Taylor-Vaisey A. Impact of formal continuing medical education: do conferences, workshops, rounds, and other traditional continuing education activities change physician behavior or health care outcomes? *JAMA* 1999 Sep 1; 282(9):867-874.
6. Novack DH, Suchman AL, Clark W, Epstein RM, Najberg E, Kaplan C. Calibrating the physician. Personal awareness and effective patient care. Working Group on Promoting Physician Personal Awareness, American Academy on Physician and Patient. *JAMA* 1997 Aug 13; 278(6):502-509.
7. *Perseus Survey Solutions* [computer program]. Version 6.0 Braintree, MA: Perseus Development Corporation; 2004.
8. McNair DM, Lorr M, Droppleman LF. *POMS Profile of Mood States Manual*. Tonawanda, NY: Multi-Health Systems; 1992.
9. Curran S, Andrykowski MA, Studts JL. Short form of the Profile of Mood States (POMS-SF) psychometric information. *Psychol Assessment* 1995; 7(1):80-83.
10. Shacham S. A shortened version of the Profile of Mood States. *J Pers Assess* 1983 Jun; 47(3):305-306.
11. Kitzinger J. Qualitative research. Introducing focus groups. *BMJ* 1995 Jul 29; 311(7000):299-302.
12. Strauss A, Corbin J. *Basics of Qualitative Research*. 2nd ed. Thousand Oaks, CA: Sage Publications, Inc.; 1998.
13. *ATLAS.ti* [computer program]. Version 4.1. Berlin: Scientific Software Development; 1997.
14. *SPSS for Windows* [computer program]. Version 14.0.1 Chicago: SPSS Inc; 2005.

15. *StatView for Windows* [computer program]. Version 4.53. Berkeley, CA: Abacus Concepts; 1996.
16. Roberts CS, Baker F, Hann D, et al. Patient-physician communication regarding use of complementary therapies during cancer treatment. *J Psychosoc Oncol* 2005; 23(4):35-60.
17. Ben Arye E, Bar-Sela G, Frenkel M, Kuten A, Hermoni D. Is a biopsychosocial-spiritual approach relevant to cancer treatment? A study of patients and oncology staff members on issues of complementary medicine and spirituality. *Support Care Cancer* 2006 Feb; 14(2):147-152.
18. Hayes KM, Alexander IM. Alternative therapies and nurse practitioners: knowledge, professional experience, and personal use. *Holist Nurs Pract* 2000 Apr; 14(3):49-58.
19. Lindquist R, Tracy MF, Savik K. Personal use of complementary and alternative therapies by critical care nurses. *Crit Care Nurs Clin North Am* 2003 Sep; 15(3):393-399.
20. Tracy MF, Lindquist R, Watanuki S, et al. Nurse attitudes towards the use of complementary and alternative therapies in critical care. *Heart Lung* 2003 May; 32(3):197-209.
21. Winslow CL, Shapiro H. Physicians want education about complementary and alternative medicine to enhance communication with their patients. *Arch Intern Med* 2002 May 27; 162(10):1176-1181.
22. Asch DA, Jedrzewski MK, Christakis NA. Response rates to mail surveys published in medical journals. *J Clin Epidemiol* 1997 Oct; 50(10):1129-1136.

Table 1. Personal and Professional Use of Modalities

Modalities	Personal *				Professional (Use or Recommend)			
	n	Pre-training (%)	Follow-up (%)	P value	n	Pre-training (%)	Follow-up (%)	P value
Acupuncture	69	28	23	.61	50	84	92	.29
Chinese Herbs	NA	NA	NA	NA	50	64	70	.51
Exercise	70	97	97	1.0	50	90	98	.22
Healing Touch	68	31	28	.77	50	68	68	1.0
Imagery	70	69	86	.004	50	80	98	.01
Massage	70	71	73	1.0	48	94	100	.25
Meditation	70	77	87	.07	49	84	98	.04
Nutrition	NA	NA	NA	NA	50	92	98	.25
Other Energy†	NA	NA	NA	NA	35	24	68	.001
Reiki	68	27	21	.34	48	60	69	.40
Relaxation	70	89	99	.016	50	86	100	.02
Sound/Music	NA	NA	NA	NA	48	63	80	.04
Supplements	NA	NA	NA	NA	49	76	88	.07
Tai Chi or Qi Gong	70	20	31	.04	49	73	78	.73
Yoga	69	52	57	.63	50	82	92	.13

*NA- Not Applicable. These modalities were not asked for the personal use questions.

† “Other energy” reported included Jin Shin Jyutsu[®], Craniosacral, Polarity and BodyTalk therapies, acupressure, the Rosen and Trager[®] methods, and tuning fork sound therapy.

Table 2. Mastering Course Objectives*

Perceived Skills Based on Course Objective Statements	n	Pre - Training	Post - Training	6 month Follow-up	Friedman Test χ^2	Friedman Test P Value	P Value for Change over Time†		
							Pre vs Post	Post vs Follow-up	Pre vs Follow-up
I am equipped to help cancer patients develop individualized programs of comprehensive integrative cancer care.	47	4.7 (2.8)	7.1 (2.3)	7.0 (2.3)	34.0	< .001	< .001	.98	< .001
I am skilled in critically evaluating the scientific literature on complementary and alternative therapies for cancer.	47	5.0 (2.7)	6.7 (2.2)	6.6 (2.3)	25.5	< .001	< .001	.64	< .001
I am equipped in determining how to refer my clients to appropriately trained and experienced practitioners of complementary medicine.	47	6.1 (3.0)	8.5 (1.7)	8.2 (2.0)	32.4	<.001	< .001	.35	< .001
I am skilled in guiding and counseling patients through the stages in the process of cancer treatment.	46	5.4 (2.8)	7.5 (2.0)	7.8 (2.1)	34.1	<.001	< .001	.16	< .001
I have a basic understanding of psychoneuroimmunology and its relevance to the treatment of cancer.	47	5.6 (2.8)	7.9 (2.0)	8.0 (2.1)	45.8	<.001	< .001	.49	< .001
I am equipped to deal with the following turning points and crises of cancer care:									

Diagnosis	46	6.2 (2.5)	8.3 (1.8)	8.2 (2.2)	30.5	<.001	< .001	.81	< .001
Side Effects of Treatment	45	6.2 (2.7)	7.8 (2.1)	7.8 (2.2)	28.6	<.001	< .001	.99	< .001
Recurrence	45	6.1 (2.4)	7.9 (1.9)	8.2 (2.1)	40.3	<.001	< .001	.16	< .001
Death and Dying	45	7.2 (2.5)	8.2 (1.8)	8.4 (2.0)	27.9	<.001	.002	.28	< .001

* Data are given as mean(SD). Responses were scored on a scale of 1-10 where 1 = Strongly Disagree and 10 = Strongly Agree

† After Bonferroni adjustment, *P* values less than .017 (.05/3) are considered significant.

Table 3. Profile of Mood States*

Profile of Mood States Subscales	n	Pre-Training	Post-Training	P value
Tension-Anxiety	65	4.1 (3.1)	3.0 (3.2)	.004
Depression-Dejection	64	2.6 (2.9)	2.3 (3.0)	.55
Anger-Hostility	66	3.1 (3.4)	1.7 (2.4)	.003
Vigor-Activity	64	12.2 (4.4)	12.2 (3.7)	.93
Fatigue-Inertia	64	5.6 (4.6)	4.8 (3.6)	.36
Confusion-Bewilderment	65	3.8 (2.5)	3.9 (2.6)	.93

* Data are given as mean (SD).

Table 4. Reported Changes in How Participants Felt about Their Patient Care Six Months After CancerGuides® Training

Themes from Qualitative Analysis	Percent of Those Responding (n=50)	Example Quote from Written Responses
1. Enhanced Skills	20	“I feel I have more tools and hope for my patients and I feel I can help my patients explain alternatives, suggest some conventional treatments, and give some guidance based on research and the patients needs. My treatment plan is more individualized.”
2. Increased Confidence and Comfort Level in Discussing Integrative Treatments and Offering Options	16	“I feel more confident in offering suggestions and ways that patients can help themselves or seek other options for treatment when they ask.”
3. Better Listening and Patient Interaction	16	“Yes, I recognized the importance of my role in providing care. It has improved my ability to connect with my patients and their families. It has enabled me to be more effective in meeting my patients’ needs (and more understanding).”
4. Personal Changes that Affected Clinical Practice	12	“I feel more energized to continue my work in oncology social work”
5. More Familiar with Referrals and Resources	8	“I have a deeper sense of ways to identify resources and support that are effective for patients.”

Table 5. Reported Changes in Clinical Practice Six Months After CancerGuides® Training

Themes from Qualitative Analysis	Percent of Those Responding (n= 52)	Specific Examples
1. Providing Additional Programs and Services	21	mind-body skills groups; “Cancer Guides Day”; cancer support group; retreat; presentations; offering complementary care services and mind-body therapies
2. Increased Confidence and Comfort Level	19	with death and dying, mind body modalities and nutrition
3. Referrals	17	to CAM providers, nutrition consultants, websites, books, journals
4. Improved Skills	17	more aware of CAM alternatives; can provide comprehensive options; improved ability investigate treatment options; understand more about nutrition and supplements
5. Listening and Patient Interaction	13	listen more attentively; interview more thoroughly; more humility
6. Discussions with Patients	13	now discussing cutting-edge treatments and clinical trial participation, spirituality, CAM therapies, mind-body modalities; encouraging patients to take an active role; counseling on lifestyle changes; recommend relaxation techniques for stress
7. Increased Supplements and Nutrition	12	incorporate and recommend