2007 Survey of Healing Environments In American Hospitals: Nature and Prevalence

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The *2007 Complementary and Alternative Medicine Survey: Optimal Healing Environments Section* was conducted in order to better understand the nature and prevalence of initiatives thought to contribute to optimal healing environments in hospitals. Based on an existing Optimal Healing Environments Framework, the survey was distributed to 6,439 American Hospital Association (AHA) community and military hospitals in the United States. This survey was a follow-up to an earlier pilot study of 125 hospitals, *Survey of Healing Environments in Hospitals*.[1] This paper describes the *2007 Complementary and Alternative Medicine Survey: Optimal Healing Environments Section* implementation process and provides descriptive and comparative data on healing environment initiatives offered by hospitals nationwide.

Background

In 2002, the term "Optimal Healing Environments" (OHE) was coined by Samueli Institute, a non-profit research organization that explores the scientific foundations of healing and applies its research findings to health care. Samueli Institute defines healing as the process of recovery, repair and return to wholeness. This is in contrast to curing, which is defined as the eradication of disease.

The OHE concept evolved from multiple meetings and symposiums with distinguished scientists, clinicians, and patients nationwide who shared a belief that healing is a crucial aspect to managing chronic illness and the basis of sustainable approaches in health care.

As a result of these discussions, a Framework that elucidates the components of an OHE was developed. According to the Institute, an OHE supports and stimulates patient healing by combining the following approaches: developing healing intention, experiencing personal wholeness, cultivating healing relationships, practicing healthy lifestyles, applying collaborative medicine, creating healing organizations, and building healing spaces. A graphic of this Framework appears in Figure 1.

Figure 1: Optimal Healing Environments Framework

OPTIMAL HEALING ENVIRONMENTS©

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Developing Healing Intention	Experiencing Personal Wholeness	Cultivating Healing Relationships	Practicing Healthy Lifestyles	Applying Collaborative Medicine	Creating Healing Organizations	Building Healing Spaces
Expectation	Mind	Compassion	Diet	Conventional	Leadership	Nature
Hope	Body	Empathy	Exercise	Complementary	Mission	Color
					Culture	Light
					Teamwork	Artwork
Understanding	Spirit	Social Support	Relaxation	Traditional	Technology	Architecture
					Evaluation	Aroma
Belief	Energy	Communication	Balance	Integrative	Service	Music

ENHANCE AWARENESS · ENHANCE INTEGRATION · ENHANCE CARING · ENHANCE HEALTH HABITS · ENHANCE MEDICAL CARE · ENHANCE PROCESS & STRUCTURE · ENHANCE SENSORY INPUT

INNER ENVIRONMENT   OUTER ENVIRONMENT

In 2006, to better understand the nature and prevalence of initiatives thought to contribute to healing environments in hospitals, the Institute created the *Survey of Healing Environments in Hospitals* and piloted it with a sample of 125 hospitals in the upper Midwest region of the United States.[1] Results from the survey suggested that hospitals are developing and implementing a wide variety of initiatives that relate to all seven components in the OHE Framework; some components are being addressed more than others. However, because the results of the pilot were from a small convenience sample, conclusions could not be generalized to hospitals across the country. The *2007 Complementary and Alternative Medicine Survey: Optimal Healing Environments Section* was an effort to gather more generalizable data and broaden our understanding of OHE initiatives in American hospitals.

Survey Description

Since 2005, Health Forum, a subsidiary of the American Hospital Association (AHA), has mailed out a biannual survey to hospitals across the nation to gather information on the use of complementary and alternative medicine (CAM) programs and services in hospitals. It is the only national survey that collects data on CAM use in hospitals.

In 2007, 34 questions about optimal healing environments were added to the *2007 Complementary and Alternative Medicine Survey*, which contained a total of 81 items. Twenty-six of the OHE questions were a separate, stand alone *Optimal Healing Environments Section* and eight additional questions were incorporated into the main body of the CAM survey. The OHE questions were created by a multi-disciplinary team comprised of individuals with expertise in clinical delivery, health services research, public health, financial analysis and complementary and alternative medicine. The OHE questions were organized around the OHE Framework components and sought quantitative data about healing environment initiatives in the hospitals. Based on feedback from the earlier pilot survey, *Survey of Healing Environments in Hospitals,*[1] authors of the questions greatly decreased the number of questions, eliminated redundancy, and provided clear definitions of terms such as "healing," "curing," and "optimal healing environments." The *Optimal Healing Environments Section* of the *2007 Complementary and Alternative Medicine Survey* is attached as Appendix 1.

Sample and Methods

On October 30, 2007, the *2007 Complementary and Alternative Medicine Survey* was sent to 6,439 open and operating American Hospital Association (AHA) member and non-member community and military hospitals across the United States. It was mailed out and recipients were given the option of responding online or through the mail in a prepaid envelope. The deadline for completion was originally December 2007 and was extended through January 2008 in order to help facilitate a better response rate.

To assist survey respondents in transitioning from answering questions about overall CAM to questions about optimal healing environments, an introduction was placed at the top of the OHE Section of the survey and the following definition of an optimal healing environment was given:

"An optimal healing environment is defined as one where all aspects of patient care – physical, emotional, spiritual, behavioral, and environmental – are optimized to support and stimulate healing in addition to curing."

The OHE section of the survey contained 26 statements addressing the 7 different components of an Optimal Healing Environment, as defined by Samueli Institute's OHE Framework. The seven components were: Developing Healing Intention, Experiencing Personal Wholeness, Cultivating Healing Relationships, Practicing Healthy Lifestyles, Applying Collaborative Medicine, Creating Healing Organizations, and Building Healing Spaces. (See Figure 1) Respondents were asked to read each statement and indicate how true the statement was for their health care facility. Each answer choice was based on a Likert-type scale as follows: 0 = "not applicable," 1 = "not at all true," 2 = "not very true," 3 = "somewhat true," and 4 = "very true."

Since each construct, with the exception of Experiencing Personal Wholeness, was assessed by multiple statements, a construct score was computed by summing respondents' answers for each statement that made up each construct. For example, the Developing Healing Intention construct had two statements:

1) *There is an assessment of the patient's and family's beliefs about healing and recovery sometime during the hospital stay.*

2) *Patients and staff talk about the ideal outcome of the patient's stay*.

The response from each of those two questions (possible range of 0-4 for each question) was aggregated to derive a total Developing Healing Intention score. The higher the score (possible range of 0-8) the more likely the respondent was to have chosen either "somewhat true" or "very true" for each statement. A minimal score was also computed for each construct so that only those respondents who had chosen either "somewhat true" or "very true" for each statement, or for the majority of the statements comprising that construct (resulting in a score of 6 or greater for our Developing Healing Intention, for example), could be considered to have that component of an OHE in their hospital. Calculating the number of respondents obtaining the minimal score on all 7 constructs enabled us to gain a general snapshot of the extent of ongoing OHE initiatives in hospitals.

Additionally, we examined whether or not some key demographics were related to the incidence of respondents reporting that the statements were "somewhat true" or "very true" for their facility. Those demographics were:

1) Bed size: operationalized as 100 beds or less = 1 , over 100 beds = 2
2) Location: operationalized as urban = 1, rural = 2
3) Teaching status: operationalized as non-teaching hospital = 1 , teaching hospital = 2

T-tests were utilized to examine whether any significant differences existed between groups on the Likert scale scores for each OHE construct and their overall OHE score. Data were successfully collected from 748 AHA hospitals across the country for a response rate of 12%. Further identifying information was provided by AHA/Health Forum to the Institute later in the year. Once received, the data were cleaned and converted to a format that can be statistically analyzed through the SPSS program. Data were analyzed using SPSS version 17.0.

Results

Figure 2 presents a general overview of the percentage of respondents indicating "somewhat true" or "very true" for each statement within each of the seven constructs comprising the Optimal Healing Environments (OHE) Framework.

Figure 2. Percentage of Positive Responses for Optimal Healing Environment (OHE) Constructs
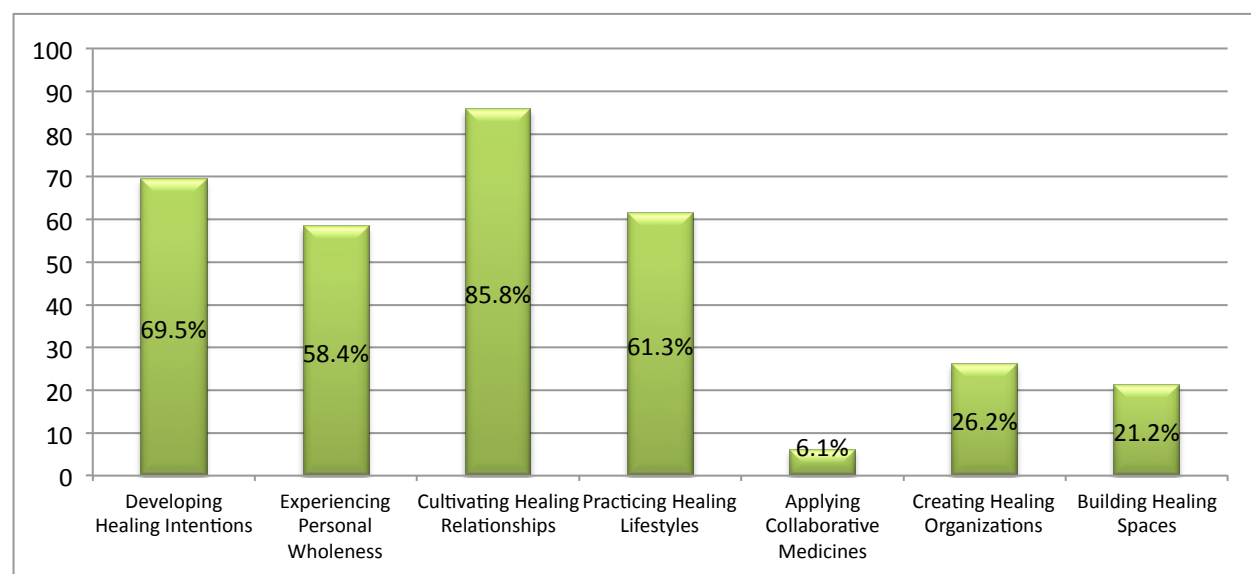
Construct specific results are presented below according to the OHE Framework: Developing Healing Intention, Experiencing Personal Wholeness, Cultivating Healing Relationships, Practicing Healthy Lifestyles, Applying Collaborative Medicine, Creating Healing Organizations, and Building Healing Spaces.

Component I: Developing Healing Intention

Healing intentions are an important part of an OHE. Samueli Institute defines healing intention as, the conscious and mindful determination to improve health – through *expectation* of improvement in health, well-being and a meaningful productive life, *hope* and *belief* that a desired health goal can be achieved even if it is not cure, and *understanding* by discovering meaning within illness and suffering. The developing healing intention questions measured whether hospitals encouraged patients, families and providers to address healing intentions. More specifically, statements assessing the construct of Developing Healing Intention were:

> 1) *There is an assessment of the patient's and family's belief about healing and recovery sometime during the hospital stay.*
> 2) *Patients and staff talk about the ideal outcome of the patient's stay.*

There were 591 valid responses to each of these questions. Scores for each question contained within this construct ranged from 0-4. Scores for the total Healing Intention construct ranged from 0-8. For the valid responses, the mean for the Healing Intention construct was 6.06 ($SD = 1.67$). For the overall Healing Intention construct, 69.5% of survey respondents achieved the minimum score of 6 or greater, indicating that they answered "somewhat true" or "very true" for both questions as it applies to their hospital. With regards to the two questions aimed at assessing healing intention initiatives, 68.5% of respondents indicated that it was "somewhat true" or "very true" that there is an assessment of the patient's and family's belief about healing and recovery sometime during the hospital stay and 88.8% responded that it was "somewhat true" or "very true" that patients and staff talk about the ideal outcome of the patient's stay.

In terms of our demographic variables of interest, the results of our t-tests revealed that teaching hospitals were significantly more likely than non-teaching hospitals to have healing intention initiatives, $t(589) = -2.22, p = .03$. Hospitals with more than 100 beds were only marginally more likely to have healing intention initiatives than hospitals with 100 beds or less, $t(589) = -1.87, p = .06$, and urban

hospitals were significantly more likely to have healing intention initiatives than rural hospitals, $t(589) = 3.73$, $p < .001$. Figure 3 represents the means for each demographic variable.

Figure 3.   Healing Intentions: Comparative Means of Demographic Variables (Range = 0-8)
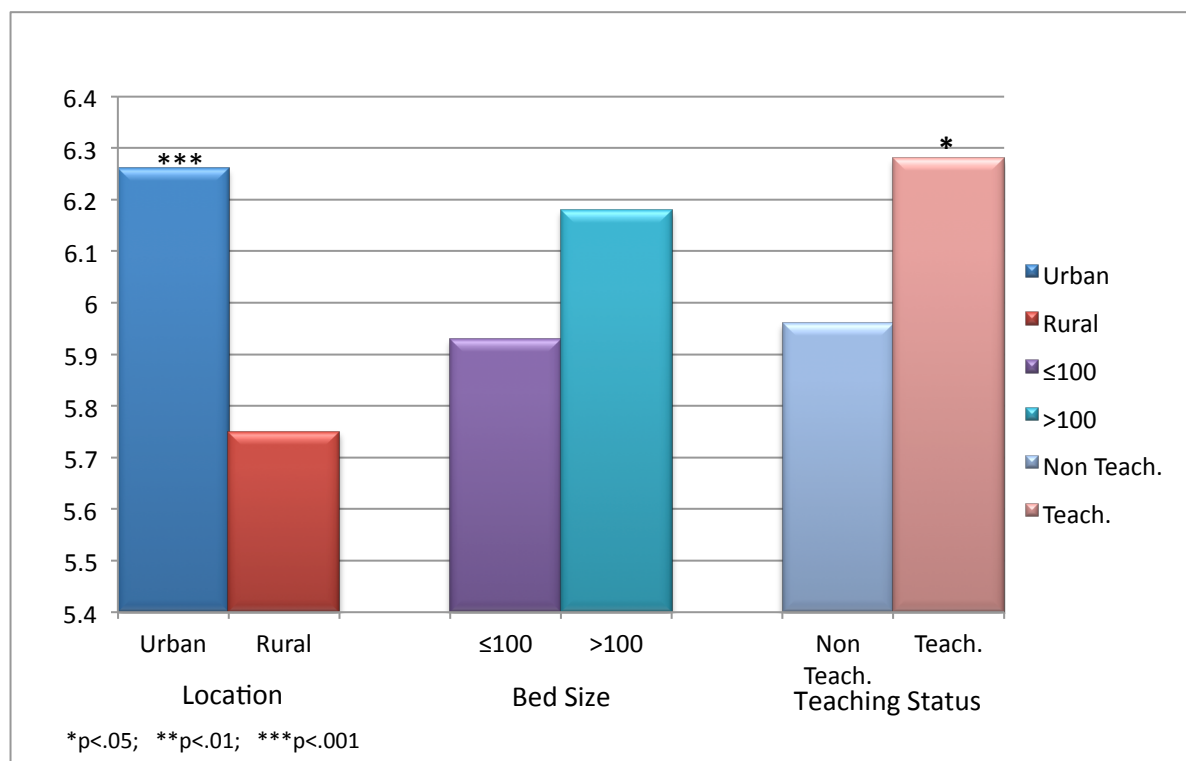

Component II: Experiencing Personal Wholeness

This part of the survey assessed whether hospitals facilitate personal wholeness. Personal wholeness includes the congruence of mind, body, spirit, and energy. In an OHE, opportunities are provided for patients, families, and staff to nurture their personal growth and experience personal wholeness. The Experiencing Personal Wholeness construct was assessed via the following statement:

   1) *There are learning opportunities available to facilitate personal growth for patients.*

With a range of 0-4, the 591 respondents to this question had a mean of 2.53 ($SD = 1.11$). Of those who responded, 58.4% indicated that it was "somewhat true" or "very true" that there were learning opportunities available to facilitate personal growth for patients in their hospital. Teaching hospitals

were significantly more likely than non-teaching hospitals to report that it was "somewhat true" or "very true" that learning opportunities were available to facilitate personal growth for patients in their hospital, $t(589) = -3.44$, $p = .001$, as were hospitals with more than 100 beds when compared to hospitals with 100 beds or less, $t(589) = -3.46$, $p = .001$. Additionally, urban hospitals were significantly more likely to report personal wholeness initiatives than rural hospitals, $t(589) = 4.70$, $p < .001$. Figure 4 represents the means for each demographic variable.

Figure 4. Personal Wholeness: Comparative Means of Demographic Variables (Range = 0-4)

*p<.05; **p<.01; ***p<.001
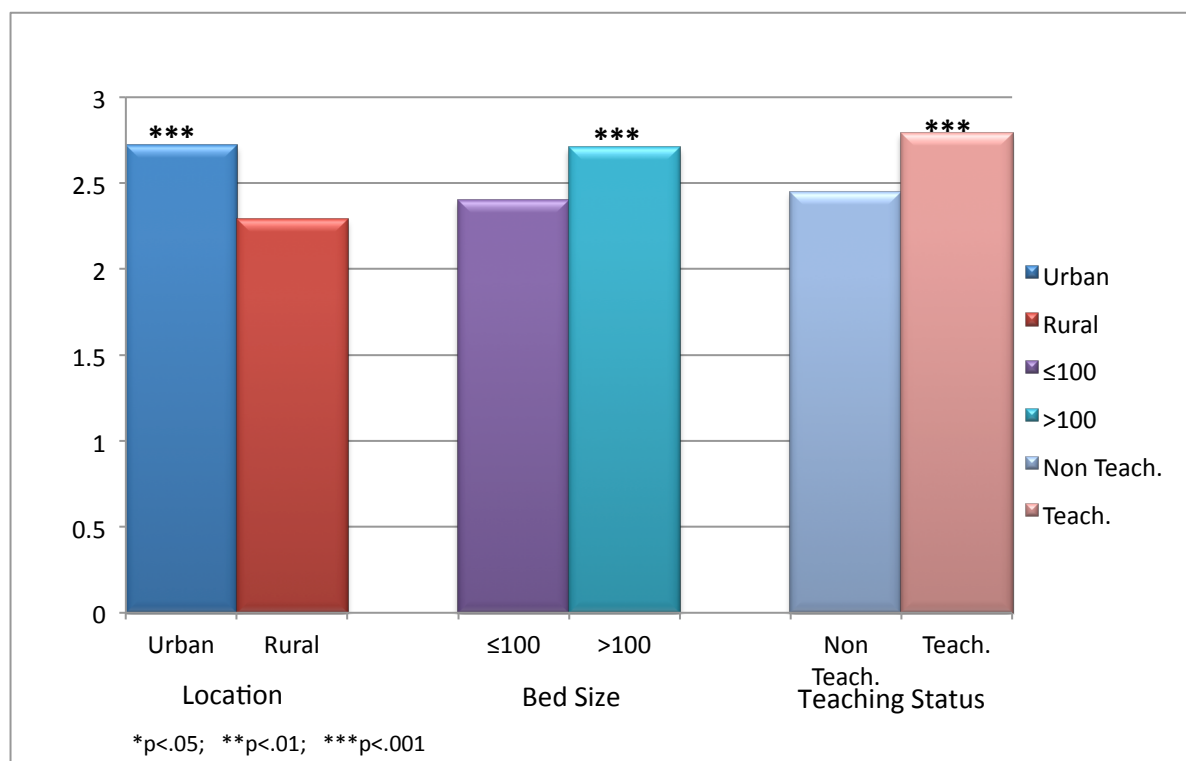
Component III: Cultivating Healing Relationships

There is growing consensus that patient-provider relationships can either foster or hinder a patient's recovery and overall well-being.[2,3,4,5] A strong social support network can also aid healing. The Cultivating Healing Relationships questions assessed how each hospital sought to enhance the quality of patient-provider relationships and addressed the social support of its patients via the following four statements:

1) Patients' social support networks are routinely assessed.

2) *The hospital assures continuity of care between the health care team and patients.*

3) *Members of the health care team have been trained in communication skills that enhance patient provider communication.*

4) *Staff is trained in the cultivation of compassion and empathy for patients, including dealing with difficult patients and delivery of bad news.*

Scores for each of the four statements comprising this construct ranged from 0-4. The range for the full Cultivating Healing Relationships construct was 0-16. There were 587 valid responses to all four of these statements and the mean for this construct was 13.60 (SD =2.54). For the overall Cultivating Healing Relationships construct, 85.8% of survey respondents achieved the minimum score of 12 or greater, indicating that they answered "somewhat true" or "very true" for all or a majority of the statements. With respect to the individual items, 80.1% reported that it was "somewhat true" or "very true" that patients' social support networks are routinely assessed; 95.4% reported it was "somewhat true" or "very true" that the hospital assures continuity of care between the health care team and patients; 86.6% that it was "somewhat true" or "very true" that members of the health care team have been trained in communication skills that enhance patient provider communication; and 88.8% stated it was "somewhat true" or "very true" that staff is trained in the cultivation of compassion and empathy for patients, including dealing with difficult patients and delivery of bad news.

Our examination of the scores on the full Cultivating Healing Relationships construct by our targeted demographic variables revealed a significant difference between teaching and non-teaching hospitals such that teaching hospitals were more likely to report cultivating healing relationships initiatives in their facilities than non-teaching hospitals, $t(585)$ =-3.20, p =.002. Hospitals with over 100 beds were significantly more likely to report initiatives of cultivating healing relationships than hospitals with 100 beds or less, $t(585)$ =-2.32, p =.02; and urban hospitals were significantly more likely than rural hospitals to respond that it is "somewhat true" or "very true" that their facility offers cultivating healing relationships initiatives, $t(585)$ =3.91, p <.001. Figure 5 shows the means for the demographic variables we assessed.

Figure 5. Cultivating Healing Relationships: Comparative Means for Demographic Variables (Range = 0-16)
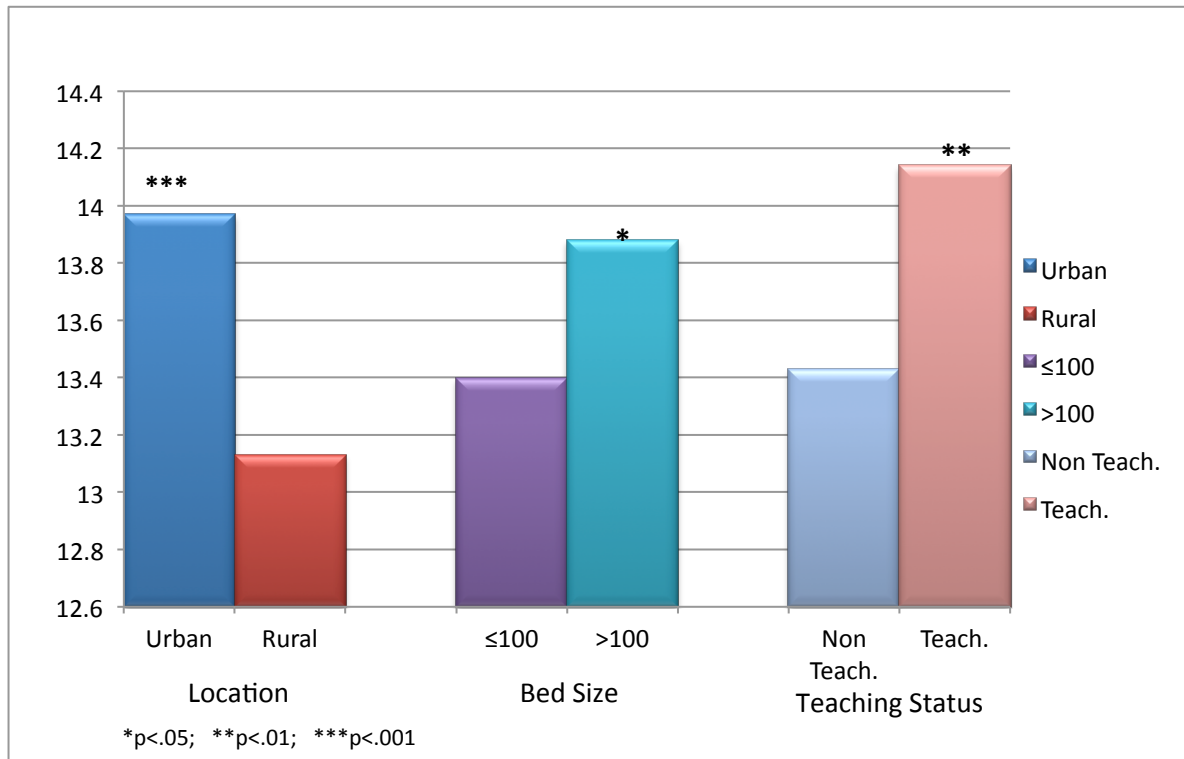
Component IV: Practicing Healthy Lifestyles

Individuals (and groups) can practice behaviors which enhance their health and prevent future development of disease. As part of an OHE, hospitals can provide programs to support healthy practices. It is widely accepted that three important components of living a healthy lifestyle are eating nutritiously, exercising, and maintaining balance through stress management/relaxation.[6] The Practicing Healthy Lifestyles questions inquired about hospital programs and opportunities that would facilitate the adoption of these practices. More specifically, this construct was assessed via the following five statements:

  1) Hospital policies encourage staff to participate in programs to manage addictions such as smoking and alcohol.

  2) Hospital policies encourage staff to participate in nutritional counseling.

  3) Hospital policies encourage staff to participate in weight management programs.

*4) Hospital policies encourage staff to participate in exercise and fitness.*

5) Hospital policies encourage staff to participate in programs to manage stress and maintain work/life balance.

For each of these statements the range of responses was 0-4. The total construct range was 0-20 with a mean of 14.60 (*SD* = 4.52). For the overall Practicing Healthy Lifestyles construct, 61.3% of survey respondents achieved the minimum score of 15 or greater, indicating that they responded "somewhat true" or "very true" for all or a majority of the statements. The percentage of hospital respondents that indicated that it was "somewhat true" or "very true" that their facility had policies encouraging staff participation in each healthy lifestyle practice is as follows: programs that manage addictions such as smoking and alcohol, 82.5%; programs in nutritional counseling, 71.8%; programs for weight management, 67.3%; programs encouraging fitness and exercise, 71.0%; and programs to manage stress and maintain work/life balance, 69.9%.

Teaching hospitals were significantly more likely than non-teaching hospitals to report that their facilities offered initiatives in practicing healthy lifestyles for the staff, $t(586) = -2.75$, $p = .004$. Hospitals with more than 100 beds were also significantly more likely to offer initiatives in practicing healthy lifestyles for their staff, $t(586) = -3.86$, $p < .001$, as were urban hospitals compared to rural hospitals, $t(586) = 3.05$, $p = .002$. Figure 6 shows the means for the demographic variables.

Figure 6. Practicing Healthy Lifestyles: Comparative Means for Demographic Variables (Range = 0-20)
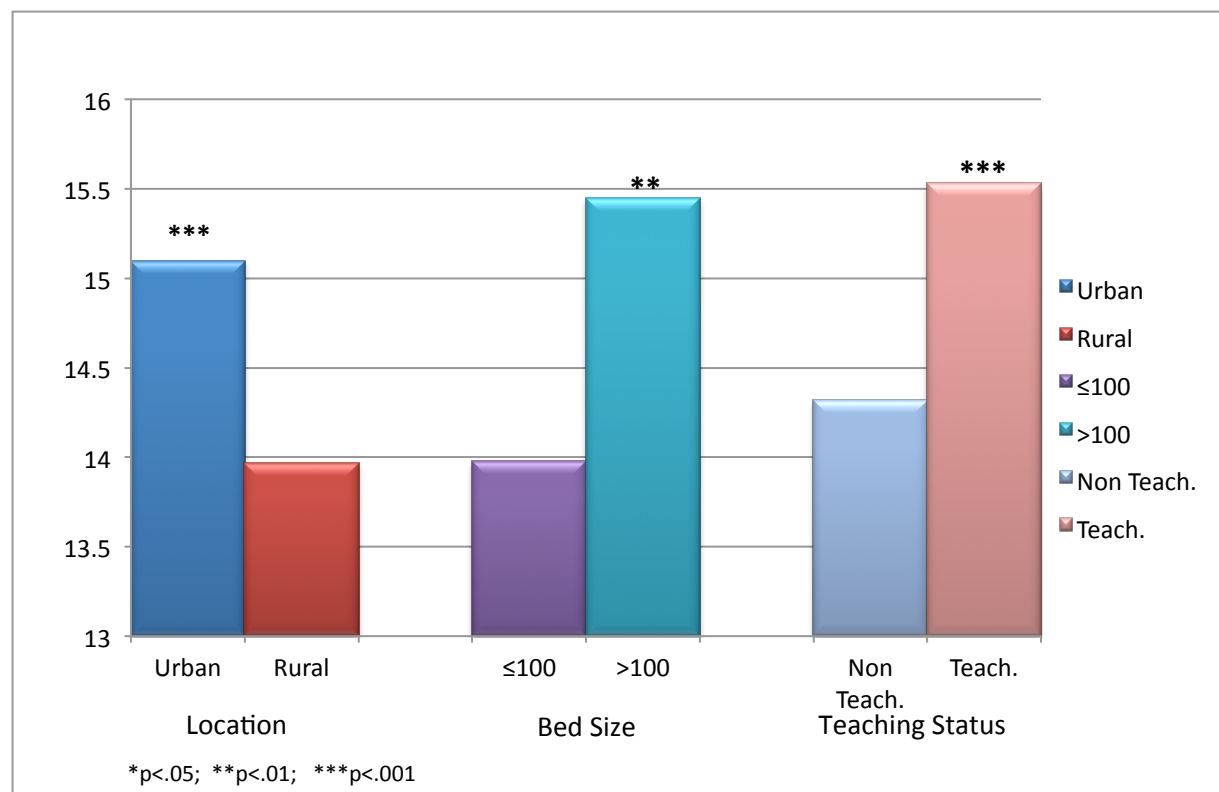
## Component V: Applying Collaborative Medicine

Collaborative medicine is the application of a variety of practices from conventional medicine as well as complementary therapies. Collaborative medicine takes an integrative approach to optimizing health. The Applying Collaborative Medicine questions assessed whether CAM therapies were routinely incorporated into patient care. The three statements assessing the Applying Collaborative Medicine OHE construct were as follows:

> *1) Mind/body therapies are regularly incorporated into patient care. (for instance, mindfulness meditation, relaxation response, yoga, Tai Chi, breathing training and other similar exercises).*
> *2) Energy practices are regularly incorporated into patient care. (for instance, Therapeutic Touch, Healing Touch, Reiki or other similar practices).*
> *3) When appropriate, staff routinely incorporates complementary and alternative medicine into patient care.*

For each of the tree statements, the range of responses was 0-4. For the full Applying Collaborative Medicine construct the range of values was 0-12 with a mean construct score of 4.33 ($SD = 2.54$). Of the 586 respondents who had valid answers for all of the statements comprising the Applying Collaborative Medicine construct, 6.1% achieved the minimal value of 9 or higher, indicating that they responded "somewhat true" or "very true" for all or a majority of the statements. 14.3% of respondents replied that it was "somewhat true" or "very true" that at their hospital mind/body therapies are regularly incorporated into patient care, and 11.8% replied that it was "somewhat true" or "very true" that within their hospital energy practices are regularly incorporated into patient care. 18.5% responded that it was "somewhat true" or "very true" that when appropriate, staff routinely incorporate complementary and alternative medicine into patient care.

In terms of Applying Collaborative Medicine, teaching hospitals were significantly more likely than non-teaching hospitals to respond that CAM therapies were routinely incorporated into patient care, $t(585) = -3.32$, $p = .001$. Hospitals with more than 100 beds were also significantly more likely than hospitals with 100 beds or less to report that CAM therapies were routinely incorporated into patient care, $t(585) = -3.04$, $p = .003$; urban hospital were significantly more likely than rural hospitals to report the same, $t(585) = 5.92$, $p < .001$. See figure 7 for the means of the demographic variables discussed above.

Figure 7. Applying Collaborative Medicine: Comparative Means for Demographic Variables (Range = 0-12)

*p<.05; **p<.01; ***p<.001
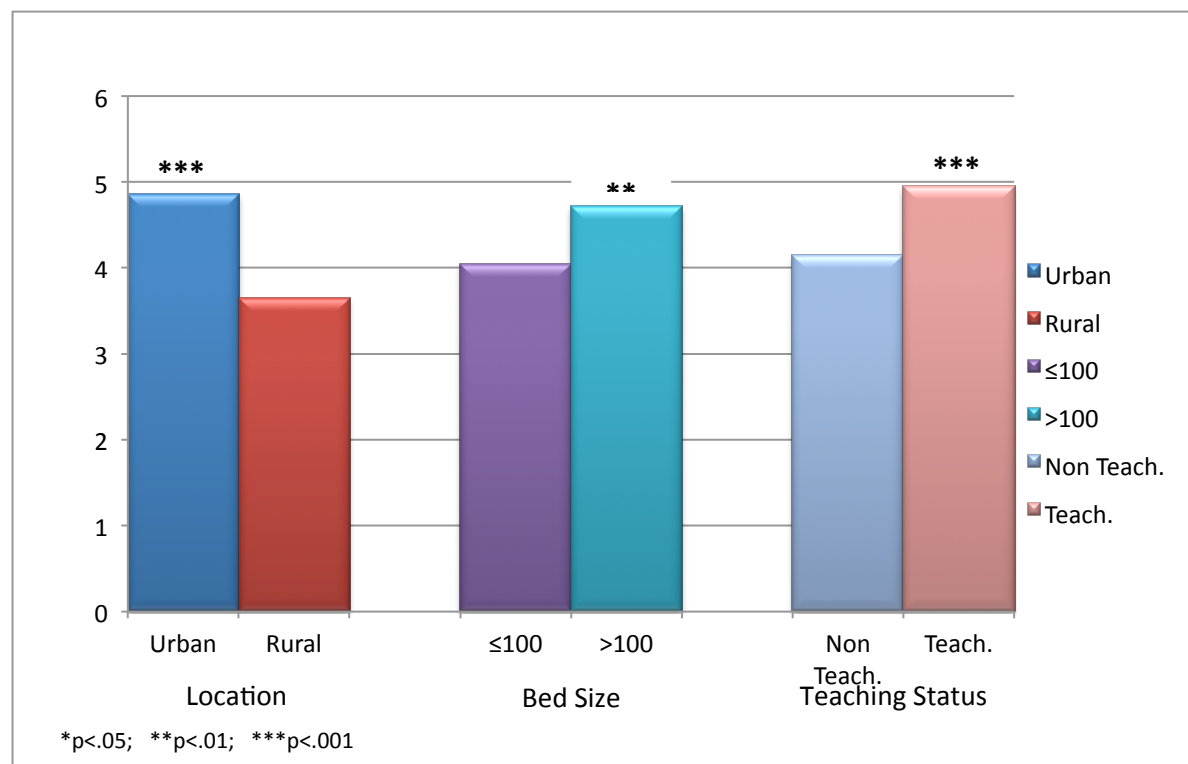
Component VI: Creating Healing Organizations

Successful creation of healing organizations requires the support of the leadership and organizational decision makers. It requires a culture that emphasizes healing, both formally and informally. The Creating Healing Organizations questions assessed the leadership environment and values found in the hospitals. They were as follows:

1) The hospital has conducted a survey among staff and physicians to evaluate how they manage their own health care.

2) There is a patient advocate or navigator available to assist patients in making health care decisions and navigating access to CAM services.

3) The organizational culture emphasizes healing (the process of recovery, repair and return to wholeness) in addition to curing (eradication of disease).

4) Part of the hospital's mission/vision addresses creating an "optimal healing environment" (as defined above in the introduction to this section.

5) Your hospital has leaders or champions whose role is to foster development of an "optimal healing environment" (as defined above in the introduction to this section).

The values for each of the statements making up the Creating Healing Organizations construct ranged from 0-4. The overall construct value range was 0-20 with a mean value of 11.50 ($SD = 4.42$). Of the 578 respondents who had valid answers to the 5 statements comprising this construct, 26.2% obtained the minimum score of 15 or higher indicating that they responded "somewhat true" or "very true" on all or a majority of the five statements. With respect to each statement, 28.3% responded that it was "somewhat true" or "very true" that their hospital has conducted a survey among staff and physicians to evaluate how they manage their own health care. It was "somewhat true" or "very true" that there is a patient advocate or navigator available to assist patients in making health care decisions and navigating access to CAM services in 38.3% of the respondent's facilities. 62.0% responded that it was "somewhat true" or "very true" that the organizational culture emphasizes healing (the process of recovery, repair and return to wholeness) in addition to curing (eradication of disease). 59.6% of the respondents indicated that it was "somewhat true" or "very true" that part of their hospital's mission/vision addresses creating an "optimal healing environment," and 57.4% said that it was "somewhat true" or "very true" that their hospital has leaders or champions whose role is to foster development of an "optimal healing environment."

Our t-test results revealed that respondents from teaching hospitals were significantly more likely than those from non-teaching hospitals to report that their facilities were healing organizations, $t(576) = -5.81$, $p < .001$. Respondents from hospitals with over 100 beds were also significantly more likely to indicate that their facility was a healing organization than those from hospitals with 100 beds or less, $t(576) = -4.51$, $p < .001$. Finally, those from urban hospital were significantly more likely to indicate that their facility was a healing organization than were those from rural hospitals $t(576) = 6.44$, $p < .001$. Figure 8 presents the means for these demographics.

Figure 8. Creating Healing Organizations: Comparative Means for Demographic Variables (Range = 0-20)
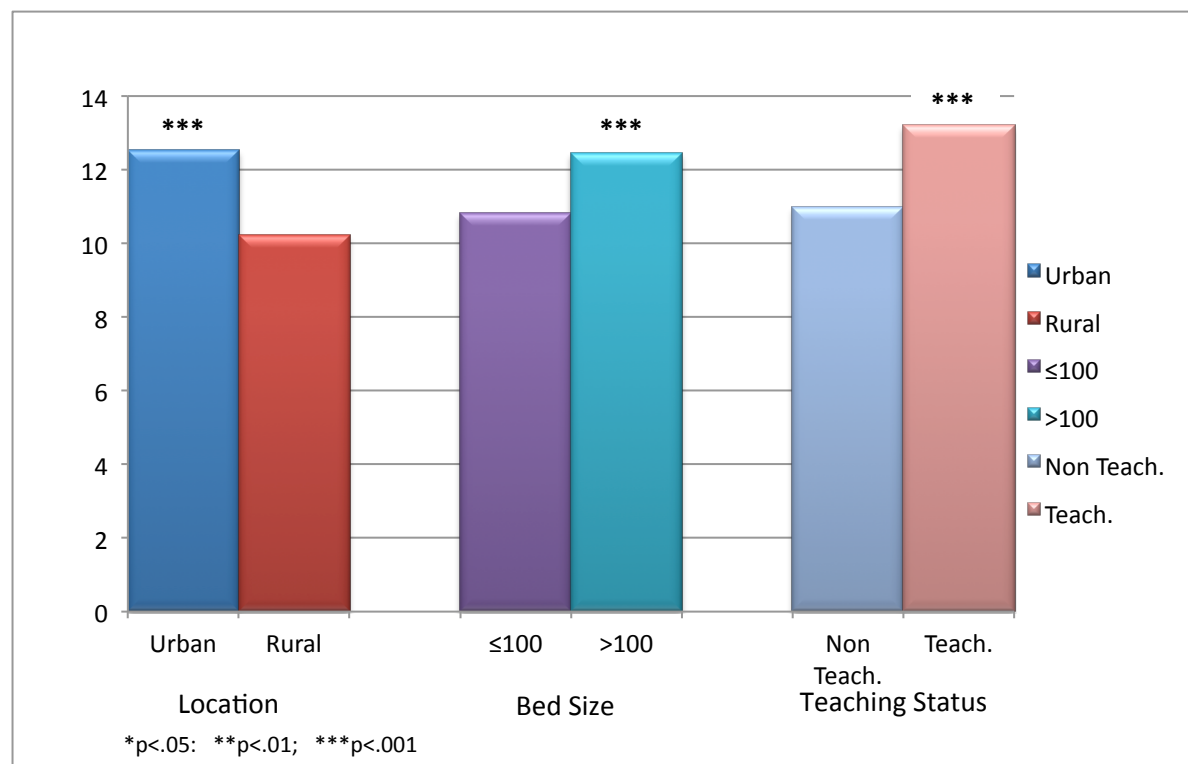
Component VII: Building Healing Spaces

The Building Healing Spaces questions addressed the physical environment of the hospitals. A physical space can contain a variety of components that may support or detract from wellness and recovery, such as architecture, nature, light, color, art, music, aroma, and water.[7] Additionally, hospitals can offer community, personal, or sacred space for patients, families, visitors, and staff to gather in or retreat to during the day as a way to enhance well-being. Statements pertaining to the Building Healing Spaces construct were as follows:

> *1) The hospital's architecture has been examined for its ability to facilitate appropriate private and social communication among patients, families and their health care providers.*
>
> *2) The hospital's architecture encourages family participation in patient care.*
>
> *3) Nature, art work and color are integral to the hospital's design.*
>
> *4) Policies are in place to reduce extraneous noise such as overhead paging and loud equipment.*
>
> *5) Aroma is used to enhance relaxation and promote wellness.*

6) The hospital uses music and/or harmonious sounds with the intent to promote recovery.

Each statement had a value range of 0-4. The overall range for this construct was 0-24 with a mean of 13.65 (*SD* = 4.80). Of the 588 valid responses to these six statements, 21.2% were at or above the minimum value of 18 indicating that those respondents indicated "somewhat true" or "very true" on all or a majority of the six items. For the first statement, "*the hospital's architecture has been examined for its ability to facilitate appropriate private and social communication among patients, families and their health care providers,*" 57.9% of respondents indicated that this was "somewhat true" or "very true." In terms of the hospital's architecture encouraging family participation in patient care, 67.1% indicated that this was "somewhat true" or "very true" of their facility. 61.0% of the respondents reported it to be "somewhat true" or "very true" that nature, art work and color are integral to their hospital's design. 69.0% indicated that it was "somewhat true" or "very true" that policies are in place to reduce extraneous noise such as overhead paging and loud equipment in their hospital, and 9.4% responded that it was "somewhat true" or "very true" that aroma is used to enhance relaxation and promote wellness. Lastly, 25.9% of respondents indicated that it was "somewhat true" or "very true" that their hospital uses music and/or harmonious sounds with the intent to promote recovery.

Teaching hospitals were significantly more likely than non-teaching to indicate that it was "somewhat true" or "very true" that their hospital had these types of healing spaces initiatives, $t(586) = -4.625, p < .001$. Respondents from hospitals with more than 100 beds were significantly more likely to report that their hospitals attended to healing spaces issues than were those from hospitals with 100 beds or less, $t(586) = -4.76, p < .001$. Those from urban hospitals were significantly more likely than those from rural hospitals to indicate it was "somewhat true" or "very true" that attending to issues of healing spaces was ongoing in their hospitals, $t(586) = 6.73, p < .001$. Figure 9 represents the mean values for each of the demographic variables mentioned above.

Figure 9. Building Healing Spaces: Comparative Means for Demographic Variables (Range = 0-24)


*p<.0; **p<.01; ***p<.001
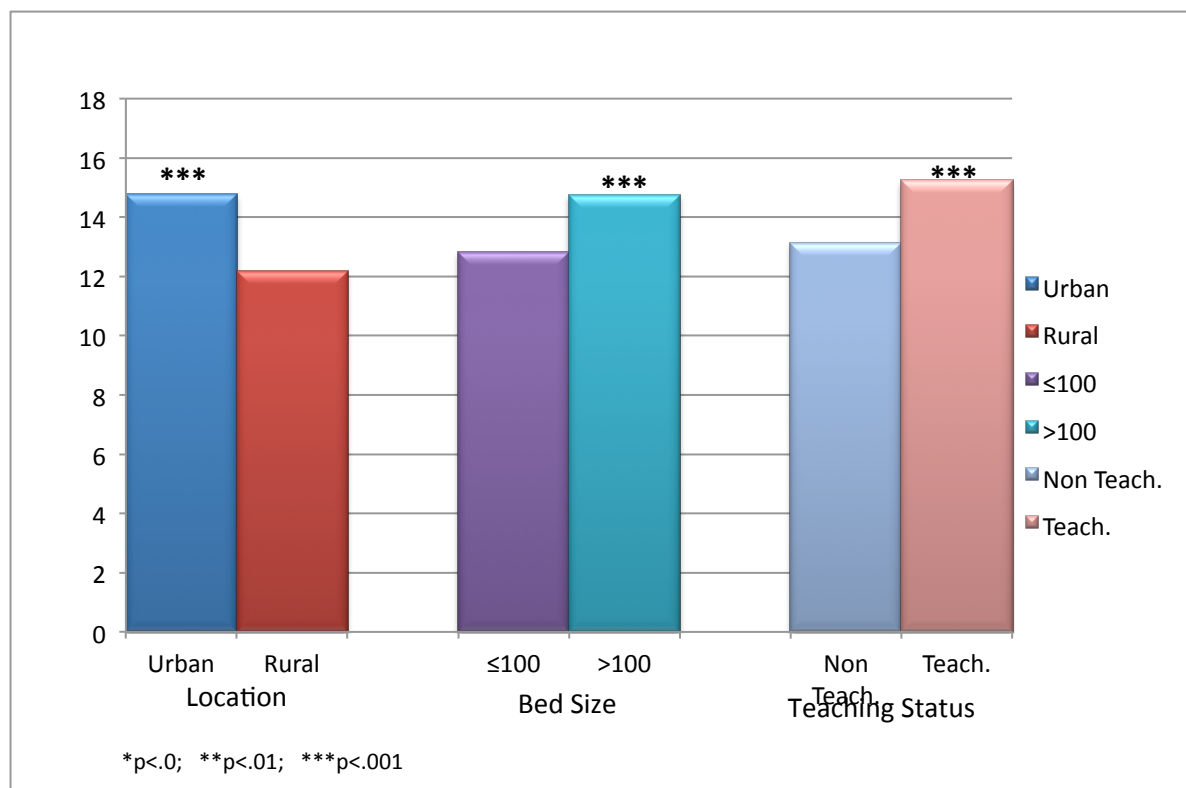
Overall Optimal Healing Environments Score

As a way of assessing the extent to which hospitals that responded to our survey had initiatives within their hospital that were attending to all of the components of an OHE and to the extent that they responded "somewhat true" or "very true" to all twenty-six OHE statements, we calculated a summed score for each hospital. The range of each item within that score was 0-4. The obtained range for the entire overall OHE score was 0-103 of a possible total range of 104. The mean was 66.24 (SD = 16.07). Of the 544 respondents who had valid responses to all 26 items, 23.2% displayed the minimum score of 78 or above indicating that they had answered "somewhat true" or "very true" to all or a majority of the twenty-six items.

Demographically, the teaching hospitals displayed a significantly higher overall OHE score than the non-teaching hospitals, $t(542)$ = -4.79, p< .001. Hospitals with more than 100 beds had a significantly higher overall OHE score than did hospitals with 100 beds or less, $t(542)$ = -4.77, $p < .001$, and urban

hospitals evidenced a significantly higher overall OHE score when compared to rural hospitals, $t(542) =$ 6.93, $p < .001$. See figure 10 for the mean values for these demographic variables.

Figure 10. Overall OHE Score: Comparative Means for Demographic Variables (Range = 0-103)

*p < .05; **p < .01; ***p< .001
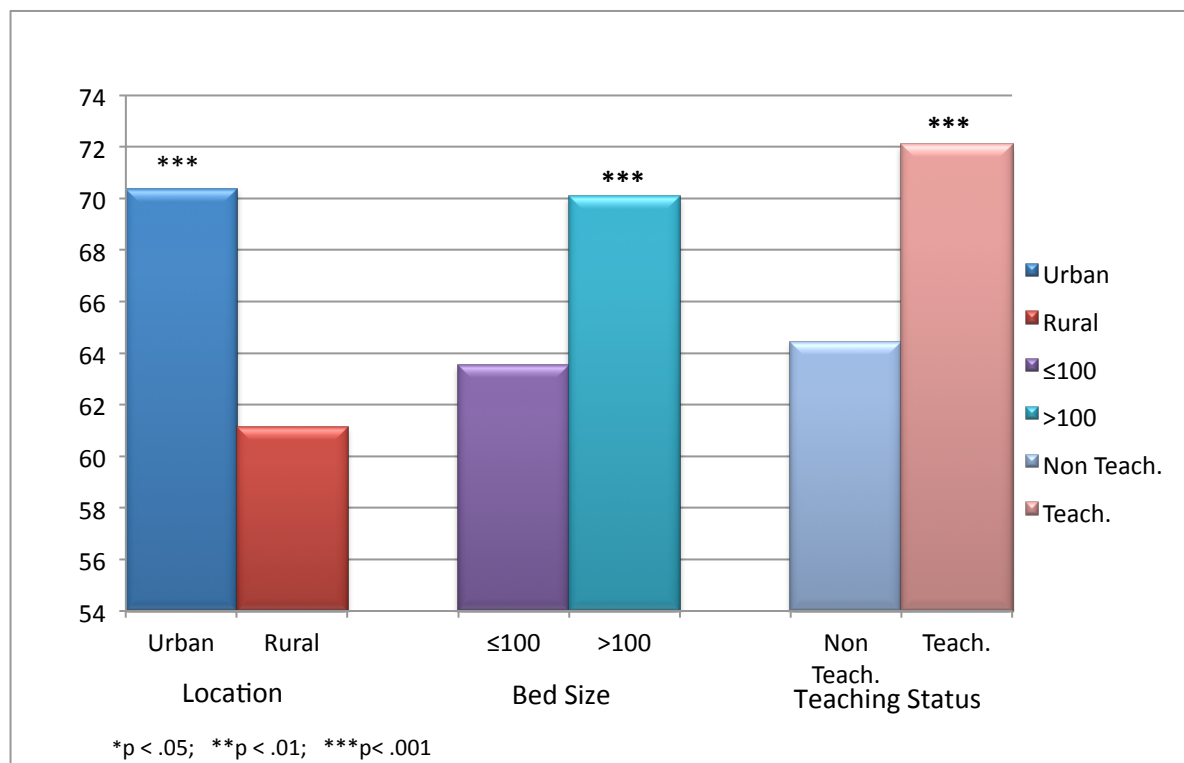
Discussion

 2007 Complementary and Alternative Medicine Survey: Optimal Healing Environments Section was an effort to gather generalizable data and broaden our understanding of OHE initiatives in American hospitals. Overall, the results from the survey suggest that hospitals across the country are developing and implementing initiatives that relate to all seven components of the OHE Framework. They are incorporating some components, such as Cultivating Healing Relationships and Developing Healing Intentions, more than others, such as Building Healing Spaces and Applying Collaborative Medicine. Of the seven OHE components, four of them are being incorporated by *over half* of all responding hospitals, a fairly substantial showing of OHE elements in hospitals nationwide. Further, 23.2% of responding hospitals indicated they had all seven or a majority of the seven OHE components in their hospitals. It is significant that almost a quarter of responding hospitals nationwide seem to be attending

in such a concentrated way to a group of elements that can support, stimulate, and optimize patient healing.

When comparing components, the span for percentage of hospitals incorporating each OHE component was wide. The range goes from a low of 6.1% of responding hospitals integrating the component of Applying Collaborative Medicine, to a high of 85.8% of respondents integrating the Cultivating Healing Relationships component. This wide range seems to indicate that OHEs are not created in a "cookie-cutter" manner in which every hospital across the country uses the same mixture of element(s). Rather, hospitals seem to be incorporating the particular OHE elements that meet the particular needs of their hospital and its patients and staff.

What are the most and least "popular" OHE components and why are some OHE components being used more frequently than others? By far, the most frequently incorporated OHE component is Cultivating Healing Relationships (used by 85.8% of respondents). This finding is consistent with our 2006 pilot survey of OHEs in Midwest hospitals, *Survey of Healing Environments in Hospitals*, which found healing relationships to be a frequent focus of hospitals.[11] This high frequency of use found in this current study suggests that hospitals nationwide realize the importance of healing relationships and are investing in their cultivation. This is not surprising given the growing body of evidence of the positive effects of the patient-provider relationship on healing.[2,4,8,9] Further, since the Institute of Medicine's (IOM's) groundbreaking *Crossing the Quality Chasm* report calling for patient-centered healthcare,[10] there has been a greater focus on putting the patient/family-provider relationship at the center of care. Encouragingly, hospitals in our survey appear to be nurturing healing relationships not only "on paper" but also by investing resources in building relationship skills; 88.8% are training health care providers in communication and 86.6% train staff in the cultivation of compassion and empathy for patients.

Developing Healing Intention is the second most popular OHE component with the surveyed hospitals (used by 69.5%). Perhaps it is frequently used among hospitals because while it is crucial, it is also simple and inexpensive. Developing healing intentions does not require sophisticated equipment or major architectural redesigns. Healing intentions can be set into motion by patients, family members, and/or providers through a brief pre-surgical prayer for healing or a bedside conversation about the

patient's hopes for recovery. Also contributing to the frequency of this OHE component might be the fact that the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) now requires hospitals to conduct a spiritual assessment with patients, [12] which would be a natural time for hospital staff to discuss with patient their beliefs and hopes for healing and recovery.

By far, the least frequently used OHE component in this survey is Applying Collaborative Medicine, incorporated by only 6.1% of responding hospitals. In some ways this is not surprising. It is consistent with data found in the 2006 pilot survey of OHEs in Midwest hospitals, *Survey of Healing Environments in Hospitals ,* in which Applying Collaborative Medicine was one of the less frequently used OHE components.[11] Even so, the percentages of hospitals offering collaborative medicine components in the current study has dropped in comparison to the earlier study. For instance, in the 2006 *Survey of Healing Environments in Hospitals* study, Therapeutic or Healing Touch was a service offered to inpatients in 23.6% of hospitals[11] as compared to only 11.8% of the hospitals in the current *2007 Complementary and Alternative Medicine Survey: Optimal Healing Environments Section*. Similarly, in the earlier 2006 survey, mindfulness meditation and breath work were offered to inpatients by 21.8% and 20.0% of responding hospitals, respectively.[11] In the current *2007 Complementary and Alternative Medicine Survey: Optimal Healing Environments Section*, only 14.3% of hospitals regularly offer mind/body therapies such as mindfulness and breath training. Perhaps the difference in numbers is due to a difference in sample size and geographic location of sample. The earlier study was a pilot of 125 hospitals in the Midwest United States and this survey covered over 6,000 hospitals nationwide. Is collaborative medicine more welcome or accepted in the Midwest? Do hospitals in that region have greater access to experienced, trained CAM providers?

The authors do not think this is the case as our results for the Applying Collaborative Medicine construct are also lower than those found elsewhere in the *2007 Complementary and Alternative Medicine Survey*, which is a national survey. As described in the introduction to this paper, the *2007 Complementary and Alternative Medicine Survey: Optimal Healing Environments Section* was a 26-question section of a larger 81-item survey, *2007 Complementary and Alternative Medicine Survey,*[13] which focused mainly on CAM. The larger CAM section of the survey found that (37.4%) of responding hospitals offered one or more CAM therapies in the hospital, as compared to our finding that 18.5% incorporate CAM into

patient care and only 6.1% have incorporated the overall Applying Collaborative Medicine construct. Is this inconsistency due to a difference in the definition of "CAM" in the various sections of the survey? Probably not, as both parts of the survey asked about similar CAM modalities (e.g., Therapeutic Touch, meditation, Reiki, relaxation therapy). Rather, the difference in frequency may be explained by the wording of the questions. The 2006 pilot *Survey of Healing Environments in Hospitals* and the CAM section of the national *2007 Complementary and Alternative Medicine Survey* each ask if CAM modalities are "available" or "provided" to patients. In contrast, the *Complementary and Alternative Medicine Survey: Optimal Healing Environments Section* asks if CAM modalities are "<u>Routinely</u> incorporated into patient care." The difference in numbers is due to the fact that while 37.4% of hospitals offer one or more CAM therapies, fewer (18.5%) have truly incorporated CAM into their standard, customary patient care practices. Even fewer, 6.1%, can say Applying Collaborative Medicine is a construct that's part of the fabric of their organization.

Unexpectedly, the second least frequently used OHE modality by hospitals in this study is Building Healing Spaces (used by 21.2% of responding hospitals). In contrast, it was the OHE component most frequently adopted by hospital responding to the pilot 2006 *Survey of Healing Environments in Hospitals*. Since there is a rising interest nationwide in hospital architecture and design as a way to enhance the quality of health care, as well as a growing body of evidence demonstrating the positive effects of building design on both patient health outcomes and hospital financial performance, the authors would have expected wider uptake of the Building Healing Spaces component by hospitals across the country. Perhaps hospitals are becoming more financially constrained and view design overhauls as too expensive. In examining individual Building Healing Spaces from the survey, we find that some elements of building a healing space (e.g., architecture that facilitates family participation and communication, policies to reduce noise) are more popular than others (e.g., aroma and music to enhance relaxation and wellness). Possibly more evidence needs to be accrued for the less frequently used elements of healing spaces to be adopted.

Comparing OHE elements demographically provides interesting findings. For every single individual OHE component, as well as OHE as a whole, urban hospitals were significantly more likely than rural hospitals to have those components in their hospitals. This was also true for teaching hospitals in

comparison to non-teaching hospitals. Similarly, hospitals with over 100 beds were significantly more likely than smaller hospitals to have an overall OHE in their hospital as well as each individual OHE component, except for the construct of Developing Healing Intention. (In the case of Developing Healing Intention, hospitals with over 100 beds were more likely to have healing intention initiatives, but the difference was not statistically significant.)

What is it about larger, urban, and/or teaching hospitals that make them more conducive to incorporating OHE components? Do larger hospitals have greater resources? Are urban and teaching environments more open to innovative concepts such as OHE?   Perhaps urban hospitals have greater access to a larger pool of skilled "non-western" health practitioners who can be integrated into their hospitals. Teaching hospitals, which historically have a research focus, may be more interested in OHE components as the evidence base is building showing the positive effects of OHE components. These are interesting questions to explore and try to answer as we continue to gather information about the nature and prevalence of hospital-based OHE initiatives.

Conclusions

The *2007 Complementary and Alternative Medicine Survey: Optimal Healing Environments Section* was designed to gather current information about the nature and prevalence of initiatives thought to contribute to OHEs in hospitals. As a follow-up to an earlier pilot study of 125 hospitals, *Survey of Healing Environments in Hospitals,*[1] the 2007 survey was an effort to gather generalizeable data from a wide sample of civilian and military hospitals in order to broaden our knowledge of OHE initiatives in hospitals across the United States. The rich findings show the survey to be a valuable tool for collecting information about hospital-based OHEs. It provided descriptive data that gives an informative picture of the types and frequencies of OHE initiatives being undertaken in hospitals today.   In the future, it would be beneficial to also gather data that can help us understand the effect of OHEs on hospital business case outcomes, such as patient and staff satisfaction, patient loyalty, quality of care, safety, and return on investment (ROI).

What do the survey findings mean for hospitals, health care systems and professionals involved in health care reform? The survey found that all seven OHE components are being implemented by hospitals

across the nation. Over half of all hospitals are implementing *four or more* components; almost a quarter of hospitals have *all seven or almost all seven* components. Given this high frequency of adoption, the findings seem to suggest that all hospitals and health care systems, in order to remain innovative and competitive, may want to begin attending to OHE components that support, stimulate, and optimize healing. Professionals involved in health care reform may also want to begin learning about OHE elements, and consider providing financial incentives for utilizing them. A natural place to start could be investing in fostering healing relationships. This OHE element is popular and has a strong body of evidence to back its effect on patient recovery and wellness. [2,3,4,5]   Hospital and health care CEOs could provide training for clinicians in communication skills and the cultivation of empathy and compassion with themselves and their patients. Health insurers could begin to offer and cover programs that prepare patients to better communicate their needs to providers. Hospitals may want to begin by focusing on Healing Intentions, another popular OHE element in surveyed hospitals. Cultivating Healing Intentions can be as simple as instructing staff to ask patients and family members about their healing goals and expectations during the clinical encounter, or sitting with patients and families and offering a pre-surgical prayer for optimal healing and recovery. However they go about it, the survey findings suggest that health care professionals who want to remain on the cutting edge would be wise to invest in development of these OHE components that support, stimulate, and optimize healing.

There were several limitations to this study. One was a low response rate of 12%. The earlier pilot survey had a much higher response rate of 44%. However, this was due to a time-extensive follow-up strategy that could be implemented with 125 hospitals but not sustained with over 6,000 hospitals. This limitation is being addressed by decreasing the number of OHE questions as well as the number of items overall in future surveys.

Another limitation involves respondent knowledge and accuracy. The survey was sent to a single respondent who answered questions for an entire hospital. Though we sent the survey to a staff person whose title implied they would have familiarity with the areas about which we were inquiring, there is no way to be sure the respondent was well-informed.

In October 2009, a follow-up survey addressing the seven OHE components was sent out to a similar

sample of over 6,000 American Hospital Association (AHA) community and military hospitals in the United States. This survey, *2009 Complementary and Alternative Medicine Survey: Optimal Healing Environments Section*, gathers almost identical data on Optimal Healing Environments and will be used to look for trends in the adoption of OHE components. Results are forthcoming.

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Appendix 1

2007 Complementary and Alternative Medicine Survey:
Optimal Healing Environments Section

In this section of the survey we transition from questions about CAM to broader questions about the healing environment in your hospital. An optimal healing environment is defined as one where all aspects of patient care – physical, emotional, spiritual, behavioral, and environmental – are optimized to support and stimulate healing in addition to curing.

For each of the following questions, please indicate how true this is of your hospital.

1. There is an assessment of the patient's and the family's beliefs about healing and recovery sometime during the hospital stay.

Very true   somewhat true   Not very true   Not at all true   Not applicable

2. Patients and staff talk about the ideal outcome of the patient's stay.

Very true   somewhat true   Not very true   Not at all true   Not applicable

3. Mind/body therapies are regularly incorporated into patient care. (For instance, mindfulness meditation, relaxation response, yoga, Tai Chi, breathing training and other similar exercises.)

Very true   somewhat true   Not very true   Not at all true   Not applicable

4. There are learning opportunities available to facilitate personal growth for patients.

Very true   somewhat true   Not very true   Not at all true   Not applicable

5. Energy practices are regularly incorporated into patient care. (For instance, Therapeutic Touch, Healing Touch, Reiki or other similar practices.)

Very true   somewhat true   Not very true   Not at all true   Not applicable

6. Patients' social support networks are routinely assessed.

very true   somewhat true   Not very true   Not at all true   Not applicable

7. The hospital assures continuity of care between the health care team and patients.

Very true   somewhat true   Not very true   Not at all true   Not applicable

8. Members of the health care team have been trained in communication skills that enhance patient-provider communication.

Very true   somewhat true   Not very true   Not at all true   Not applicable

9. Staff is trained in the cultivation of compassion and empathy for patients, including dealing with difficult patients and delivery of bad news.

Very true   somewhat true   Not very true   Not at all true   Not applicable

10. Hospital policies encourage staff to participate in programs to manage addictions such as smoking and alcohol.

Very true   somewhat true   Not very true   Not at all true   Not applicable

11. Hospital policies encourage staff to participate in nutritional counseling.

Very true   somewhat true   Not very true   Not at all true   Not applicable

12. Hospital policies encourage staff to participate in weight management programs.

very true   somewhat true   Not very true   Not at all true   Not applicable

13. Hospital policies encourage staff to participate in exercise and fitness.

Very true   somewhat true   Not very true   Not at all true   Not applicable

14. Hospital policies encourage staff to participate in programs to manage stress and maintain work/life balance.

Very true   somewhat true   Not very true   Not at all true   Not applicable

15. The hospital has conducted a survey among staff and physicians to evaluate how they manage their own health care.

Very true   somewhat true   Not very true   Not at all true   Not applicable

16. When appropriate, staff members routinely incorporate complementary and alternative medicine into patient care.

Very true   somewhat true   Not very true   Not at all true   Not applicable

17. There is a patient advocate or navigator available to assist patients in making health care decisions and navigating access to CAM services.

Very true   somewhat true   Not very true   Not at all true   Not applicable

18. The organizational culture emphasizes healing (the process of recovery, repair and return to wholeness) in addition to curing (eradication of disease).

Very true   somewhat true   Not very true   Not at all true   Not applicable

19. Part of the hospital's mission/vision addresses creating an "optimal healing environment" (as defined above in introduction to this section).

Very true   somewhat true   Not very true   Not at all true   Not applicable

20. Your hospital has leaders or champions whose role is to foster development of an "optimal healing environment" (as defined above in introduction to this section).

Very true   somewhat true   Not very true   Not at all true   Not applicable

21. The hospital's architecture has been examined for its ability to facilitate appropriate private and social communication among patients, families, and their health care providers.

Very true   somewhat true   Not very true   Not at all true   Not applicable

22. The hospital's architecture encourages family participation in patient care.
Very true   somewhat true   Not very true   Not at all true   Not applicable

23. Nature, art work and color are integral to the hospital's design.
Very true   somewhat true   Not very true   Not at all true   Not applicable

24. Policies are in place to reduce extraneous noise such as overhead paging and loud equipment.
Very true   somewhat true   Not very true   Not at all true   Not applicable

25. Aroma is used to enhance relaxation and promote well-being.
Very true   somewhat true   Not very true   Not at all true   Not applicable

26. The hospital uses music and/or harmonious sounds with the intent to promote recovery.
Very true   somewhat true   Not very true   Not at all true   Not applicable