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Caring Science Education:

The Essence of Professional Practice for the Registered Nurse

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Abstract

Problem: Hospitals have moved from caring, healing environments to business or economic models of caring institutions that focus on census instead of on patients and on technology instead of on touch or human connection (Watson, 2006).

Context: As nurse leaders, we have an obligation to create an environment of authentic, professional, human caring practices within our organizations. Caring science empowers nurses to balance the art and science of clinical judgment by engaging and collaborating with the patient and their family, focusing on the needs of the whole person, honoring the unique perception of health and healing, and engaging them to make decisions that nurture their wellbeing (Foss-Durant, McDermott, Kinney, & Triner, 2015). Integration of a theory-based professional practice, such as caring science, facilitates the connection between the nurse, patient, family, and members of the healthcare team by engaging in authentic, human caring relationships.

Intervention: This DNP project intervention focused on connecting the dots of the multiple initiatives for the staff at the bedside through caring science as the foundation for professional practice, utilizing the caritas coaches within the organization to co-create, design, implement, and evaluate the effectiveness of a standardized experiential Caring Science/Heart Science learning series for the professional nurses within this organization.

Measures: Assessing and evaluating the impact of the Caring Science/Heart Science education program was evaluated using the Caring Factor Survey – Care Provider Version (CFS-CPV) and the organization’s custom HCAPHS question, *Nurses treated me with loving kindness*.

Results: The project was successfully implemented in three of the 21 medical centers within this large, multi-site organization in Northern California. Participating in the Caring Science/Heart Science experiential learning modules were 206 RNs who completed *Enhancing Our Culture of*

Caring Module 1 and Module 2 and 99 RNs who completed Module 3 and Module 4. Based on the results of the pre- and post-CFS-CPV, each of the medical centers appreciated a positive shift for each of the elements of the CFS-CPV.

Comments: The Caring Science/Heart Science experiential learning modules were co-created by this organization's caritas coaches to reconnect the nursing staff to the essence of their professional nursing practices

Keywords: *nurse, caring theory, education, caring attributes, patient, perception, education, job satisfaction, caritas processes, and measurement.*

Section II: Introduction

Problem Description

The healthcare landscape has changed. Social, political, and economic forces of healthcare reform are challenging organizational viability. As hospital systems merge, creating mega systems, caring, and administrative practices are often in conflict. To compete for viability in this new landscape, hospitals have moved from caring-healing environments to business or economic models of caring institutions that focus on census instead of on patients and on technology instead of on touch or human connection (Watson, 2006). Aim 3 of the Institute of Medicine's (IOM) 2001 report, *Crossing the Quality Chasm*, states that healthcare must be patient-centered, focusing on the importance of the clinician working in partnership with patients to ensure the patient is an integral part of the care team and allowing them to provide their voice to their values, family situations, and lifestyles.

Nurses, the largest workforce within the healthcare system, are torn between the economic direction of the organization, increased patient acuities, rapidly changing medical technology, and the needs of patients and their families. These factors have led the professional nurse to move away from authentically caring for the patient and to instead focus on the tasks of providing patient care.

Caring is central to the nursing profession; it is through the act of caring and engaging in authentic, caring, humanistic encounters that nurses find their professional identity, and caring is one of the strongest motivators as to why individuals choose nursing as a career. By not attending to fostering the ability for nurses to engage in authentic, caring-healing relationships with their patients, organizations are placing nurses at greater risk of developing burn out and subsequently leaving the profession. Nurses are the largest group of healthcare professionals

globally, with over 19.3 million nurses (Flinkman, Isopahkala-Bouret, & Salanterä, 2013). The U.S. Department of Labor, Bureau of Labor Statistics' (2018) employment projections for 2016-2026 estimate that the nursing vacancy rate will increase by 15% from 2016 to 2026, leading to 1.2 million vacancies by 2022.

Nurses find purpose and satisfaction in their work when they have the opportunity to engage with patients and families and practice caring behaviors. When nurses lose focus on the caring aspects of nursing and engaging in authentic caring practices with their patients and families, their professional identity diminishes and leads to decreased job satisfaction (Amendolair, 2012). When nurses lose the ability to engage with their patients and to create caring moments that are critical to a healing environment for self, patient, families, and their peers, the nurse becomes bio-passive and may lose his or her desire for their profession. Dr. Jean Watson, nurse theorist and originator of the theory of human caring, calls on nurses and nurse leaders to shift authentic intention to a nursing practice that is based in ethics and values, thus restoring the human spirit for the patient and for the practitioner (Schlagel & Jenko, 2015).

PICOT Question

For nurses in a medical center (P), how does the Caring Science/Heart Science education series serve as the foundation for nursing practice (I), compared to no intervention (C), affect the following?

- Registered nurses' intentional caring behaviors in clinical practice with their patients (O), assessed within six months after completion of the Caring Science/Heart Science nursing education program (T).

- Patients' perception and reporting of being treated with loving kindness (O), assessed within six months after completion of the Caring Science/Heart Science nursing education program (T).

Available Knowledge

The Johns Hopkins Research and Non-Research Evidence Appraisal tools (Dang & Dearholt, 2017) were utilized to evaluate the strength and quality for all studies examining current evidence supporting the implementation of a caring science education program and identifying complementary factors in the healthcare system that potentiate the nurse's ability to engage patients and families in a compassionate, caring, and humanistic manner (see Appendix A).

The PICOT question guided the systematic search in September 2019, using the keywords *nurse, caring theory, education, job satisfaction, caritas processes, and measurement*. The Cumulative Index of Nursing and Allied Health Literature (CINAHL), PubMed, and Joanna Briggs Institute Library were searched, yielding 143 articles. The inclusion criteria were set to include articles in the English language published between 2008 and 2018, research completed in hospitals or in institutional settings that included nurses and patients, and quantitative or qualitative reviews. Exclusion criteria included articles that focused on specialty nursing, caring for patients with chronic illness or nurse staffing as indicators for job satisfaction. Twenty articles were chosen for further analysis based on their relevance to the PICOT question. Eight articles were chosen for critical review. Two studies were reviewed based on impact of caring cultures within the organization and the job satisfaction of the nursing staff, one study examined compassionate practices and Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS), and two studies examined the nurses' perception of their work environment

and the patients' perceptions of the nurses' caring behaviors prior to the launch of relationship-based care within the organization. The final three studies focused on measuring the perception of caring behaviors primarily from the patient's perspective. Included as the foundation for this Doctor of Nursing Practice (DNP) project was the review of evidence focusing on nurses' and patients' perceptions of caring behaviors that examined aspects of caring acts and caring behaviors or the ability to measure caring using specific caring assessment tools. As noted, there are limited research study articles available specifically focusing on educational interventions to assist staff in examining their personal, professional practice as it relates to caring science or relationship-based care that substantiate the understanding of the perceptions of nurses and patients about nurses' caring behaviors.

Nursing Education

Persky, Nelson, Watson, and Bent (2008) conducted a psychometric study examining the profile of nurses' caring effectiveness. The study group consisted of nurses ($n = 85$) and patients ($n = 85$) from New York Presbyterian Hospital/Columbia University Medical Center, creating a nurse-patient dyad. Patients and nurses selected to participate in the study were from eight pre-identified medical-surgical units and one mental health unit preparing to implement relationship-based care. The purpose of the study was to establish baseline data prior to the education and implementation of a new practice care model. The nurses completed the Health Environment Survey (HES), and the patients completed the Caring Factors Survey (CFS). The dyad review was conducted to assess the relationship of nurses' reports of care environment to the patients' perception of caring received from the nurse. The results of the study revealed nurses of all ages who scored highest in caring behaviors by their patients experienced the highest levels of frustration on the HES due to the incongruency of the environment and the nurses' values and

goals of caring. Both the HES and the CFS provided good reliability, resulting in a Cronbach alpha of .95 and .97, respectively.

Persky and colleagues (2008) reviewed both quantitative and qualitative demographic data about the nursing staff who received high scores on the patient-reported data CFS. The cumulative findings were used to create a caring profile, as perceived by the patients the nurses cared for, indicating that this group of nurses was effective in caring behaviors. These data were compared to those nurses who received lower CFS scores to determine what made the difference. Implications for practice included assisting educators in relationship-based care program development, identifying and informing leaders of barriers brought forward by staff to optimize authentic caring, creating caring competencies following education implementation, and guiding staff to restore valued practices of caring, as viewed by patients and families. Limitations identified by the authors were that the caring attributes demonstrated by nurses are a relatively new area of study, and the theoretical structures are not fully developed. Further, the limited sample size required the use of liberal statistical parameters, and there was no mention of sample completion rates for either the nurses or the patients who participated in this study (Persky et al., 2008).

Asselin and Fain (2013) conducted a mixed-methods study to determine if a nurse's participation in a reflective practice continuing education program made a difference in the self-reflection, insight, and reflective thinking about his or her care in specific clinical situations. The study was a mixed-method, pre- and post-test design, both qualitative and quantitative, and used the Self-Reflection and Insight Scale (SRIS), a 20-item, self-report questionnaire measuring self-reflection and insight for adults. The quantitative data were measured using the SRIS instrument. The instrument was proven to be valid and reliable, with the following results: Cronbach's alpha

SRIS-SR (self-reflection) = .91 and SRIS-IN (internal reflection) = .87; the test-retest reliability over a 7-week timeframe was reported as 0.77 for SRIS-SR and 0.78 for SRIS-IN. For the qualitative data, participants' reflective narratives were used. The study group consisted of registered nurses (RNs; $N = 20$) who were currently employed in an acute care setting at two community hospitals in the northeastern United States. The participants were divided into cohorts to participate in a three-part reflective practice education program. The quantitative results, which reviewed the participants' demographic data, were analyzed using a two-way RM-ANOVA. For the quantitative results, demographic characteristics demonstrated no significant differences, except in years of clinical experience: Site 1 had a mean of 27.76 years, and Site 2 had a mean of 17.85 years ($p < .002$). Based on the findings, further statistical analysis was completed using a two-way ANOVA, which revealed no significant differences between self-reflection over time between the two institutions. An additional analysis was completed using the Bonferroni procedure, which revealed that nurses did have significantly higher engagement in self-reflection immediately post-program (Time 2: $M = 30.84$; $SD = 3.99$), as compared to pre-program (Time 1: $M = 27.32$; $SD = 6.01$). The qualitative results focused on 56 written narratives by the 20 participants. The participants wrote their narratives based on their role perspective, focusing on clinical situations that evoked frustration associated with the inability to affect or lead change. Themes included nursing advocacy, attending to patients' emotional or spiritual needs, and being with and supporting the family at the time of death. While some of the participants gained professional insights from the program, others felt that they needed additional tools or education to incorporate reflection into practice. In conclusion, the authors stressed that additional studies examining larger scale reflective practice studies are needed (Asselin & Fain, 2013).

Compassionate Practices and HCAHPS

McClelland and Vogus (2014) conducted a cross-sectional study examining the benefits of compassionate care practices and the impact on two specific questions on the HCAHPS survey, *overall hospital rating*, and *willingness to recommend*. The researchers used the American Hospital Association database to obtain a random sample of 639 nonfederal acute care hospitals within the United States and used a key informant approach to assess compassion practices. They surveyed the vice president of Human Resources and either the chief operating officer or the chief executive officer in hospitals between January 2011 through March 2011. Two hundred and sixty-nine out of 639 hospitals surveyed completed the survey with usable responses. The overall response rate was 42%. McClelland and Vogus found that hospitals that were higher performers on the HCAHPS survey were more likely to respond to the survey. The compassion practices were measured using a 1 to 7 Likert-type scale survey (Cronbach's alpha = 0.82), examining the specific organizational practices that reward and support employees who demonstrate caring compassionate practices for patients, families, or co-workers. The HCAHPS measures were obtained from random survey sample data obtained between January 2011 and December 2011. The study reviewed top box responses of 9 or 10 on a scale of 0 to 10 scale for both pre-identified questions. McClelland and Vogus' findings indicated that organizations that reward employees for their caring and compassionate practices experience positively higher HCAHPS hospital ratings and an increased likelihood of recommending the organization to receive care.

Job Satisfaction

Amendolair (2012) conducted a descriptive correlational study examining the relationship between nurses' perception of their caring behaviors with their patients using the

Caring Efficacy Scale (CES) and their job satisfaction using the Index of Work Satisfaction (IWS). The study consisted of a random sample of medical-surgical nurses ($N = 1,091$) who completed the two questionnaires. The CES tool reported consistent reliability in a variety of settings, with a Cronbach's of .85 and .88. The IWS tool reported consistency and validity for the nursing population, with a Cronbach's of .82 to .91. The data were analyzed using SPSS. The surveys were tallied, and parametric statistics were used with all the summed data (Amendolair, 2012). There was an established correlation between the CES and the IWS with the nurses' ability to spend time with their patients and job satisfaction. The authors reported that nurses should reflect on the value of expressing caring behaviors to strengthen their professional identity and to improve their job satisfaction. When nurses practice caring behaviors with their patients, it creates a positive work environment, thus increasing job and patient satisfaction. Limitations identified by the author included a few published research studies using the CES and its limited application in the acute care setting (Amendolair, 2012).

Pavlish and Hunt (2012) conducted a narrative design interview study to understand nurses' perceptions of meaningful work and the contextual factors that impact the nurses' perceptions of meaning at work. The study survey was evaluated using a categorical-content analysis with ATLAS.ti data management software. Acute care hospital nurses ($N = 13$) were recruited using posted flyers at two magnet hospitals located in the southwestern United States. A qualitative method of narrative inquiry was used to better understand the nurses' contextual realities. The interviews were audio-recorded, then transcribed into written text. Utilizing a categorical-content method of narrative analysis, the interviews yielded 159 detail codes that were placed into five structural categories: (a) descriptors, (b) conditions, (c) consequences of meaningful work, (d) meaningful nursing roles, and (e) stories of meaningful moments. The

stories revealed that nurses found purpose and meaning through the relational activities of being and connecting with patients. Knowing they have made an impact on individuals' lives and that they were valued and appreciated by others was gratifying. Understanding and addressing the descriptors and conditions that affect meaningful work identified in this study could facilitate solutions for leaders and staff to work toward creating a positive practice environment. There were multiple limitations to this study. The sample size was very small, there was no clear description of the survey tool other than it being a narrative design survey, and there was no discussion of any reliability or validity testing of the tool (Pavlish & Hunt, 2012).

The evidence indicated by the work of Persky et al. (2008), Amendolair (2012), and Pavlish and Hunt (2012) is that nurses have higher job satisfaction when they engage in caring-healing encounters with patients and families; however, in each of the studies, the sample size was a significant limitation. Based on the limited literature available examining the impact of providing nursing staff education focusing on developing caring behaviors and reflective practices and the impact on their work satisfaction and the perceived caring behaviors from the patient's perspective, it was identified that further exploration and research would be appropriate.

Measurement of Caring

Understanding the drivers that influence both the patients' and the nurses' perceptions of caring, specifically based on Dr. Jean Watson's theory of human caring's *caritas* process and the different measurement tools, is identified in the following three articles.

Papastavrou, Efstathiou, and Charalambous (2010) conducted a quantitative, systematic meta-analysis review of 98 articles, narrowed down to 23 articles. The evaluation of articles was done in three phases. All articles that met predetermined inclusion criteria were divided into review teams of two. Each review team reviewed the same articles, which were then moved on to

the next phase of review if both reviewers agreed. The specific aim of this meta-analysis was to examine research for congruence between the patients' and the nurses' perceptions of caring behaviors of the nurses and to identify specific areas of agreement and disagreement of those caring behaviors that enhanced patient outcomes. The studies identified took place within various long-term and acute care settings. Various caring instruments were examined to identify the most and least nursing caring behaviors from the patients' and nurses' perspectives and any statistically significant relationships of the different perceptions. The tools identified consisted of the Caring Behavior Inventory, Caring Behavior Assessment, and Caring Dimensions Inventory.

While nurses gain job satisfaction and personal worth from increased engagement with patients, from the evidence reviewed by Papastavrou et al. (2010), the majority of the studies indicated that nurses and patients have marked differences of perceptions of caring actions or behaviors, leading to an incongruent perception in the ranking of how important nursing caring behaviors and the ranking differences between nurses and patients. Patients reported a higher value on instrumental or technical caring skills, which from their perspective, demonstrated caring through clinical competency, over the increased ranking of the expressive or affective caring behaviors that the nurses perceived to be just as valuable. Papastavrou et al. reported that the majority of nursing caring behaviors had been linked to patient satisfaction. There is limited research that relates to nurses' caring behaviors and specific patient outcomes. Further research is needed to gain more knowledge on the relationship between the nurses' caring behaviors and authentic caring practices to patient outcomes and healthcare costs.

Duffy, Hoskins, and Seifert (2007) conducted a descriptive study to obtain baseline data of the psychometric properties of the Caring Assessment Tool (CAT). The study included five acute care hospitals, with a convenience sample of 557 adult medical-surgical inpatients who

were alert and oriented. The length of stay for these patients was two days or greater, and they all were English speaking. The focus of this study was to evaluate the efficacy of the revised CAT using factor analysis and reliability statistics. The original CAT was developed in 1990, consisted of 139 items, and was used to assess the patient's perception of nursing caring behaviors. The CAT was initially revised to 100 items. Validity was measured using Cronbach alpha at .97. Increasing demands of the relationship-centered practice model required another revision of the tool to a shorter instrument. The CAT 36-item tool was tested for reliability using 365 patients who completed all 36 items. The Cronbach alpha .96 validated the internal consistency of the new 36-item tool. The CAT Version IV, with its reduced 36 items, determines the degree of nursing care as perceived by the patient. The questions are specifically directed at how often the nurse performs specific caring activities while in the hospital. The survey was delivered to the patient while they were currently in the hospital, at least 24 hours after admission. Outcomes reported in the study indicated that the revised CAT survey was easy and quick to complete and appreciated higher scores, indicating a perceived higher degree of caring by the patients (Duffy et al., 2007).

DiNapoli, Nelson, Turkel, and Watson (2010) conducted a quantitative study to develop a revised 10-item CFS based on the original 20-item CFS. The original CFS was designed to measure the concept of caring based on Dr. Jean Watson's theory of human caring. The purpose of the study was to examine the underlying structure of the 20-item CFS and to investigate if it could be revised into a valid 10-item measurement tool based on the essentials of the 10 caritas processes used by nurses to measure concepts of caring in the clinical practice setting guided by Watson's theory of human caring. Exploratory and principal component factor analysis was conducted to explore the underlying structure of the original CFS 20-item tool. The original 20-

item CFS had two items for each of the 10 caritas processes measuring caritas behaviors/ attributes of the nursing staff. The aim of this study was to evaluate if one of the paired caritas processes in the reduced 10-item survey would survive factor analysis and remain a valid measurement tool for caring (DiNapoli et al., 2010).

Eighty-nine patients and families were used to conduct an exploratory factor analysis of two 10-item scales: Model A, which examined the first item of the paired caritas processes, and Model B, which examined the second item of the paired caritas processes. DiNapoli et al. (2010) concluded that the reduction of the scale to 10 items would not invalidate the scale or the ability to measure caritas processes. The strongest loading for each of the caritas processes between Model A and Model B became Model C. The revised Model C was given to 79 patients, resulting in a reliable tool, with a Cronbach alpha = .95. A secondary approach, principal component factor analysis, was utilized using secondary data from three different studies, with an $N = 450$. An ANOVA was conducted to assess for differences in data collected in the United States versus data collected in the Philippines. The findings were that there were no differences in the assessment of the caring factors, and they all were in similar rank order. DiNapoli et al. included the results from all 450 participants in the factor analysis. The revised Model D, comprised of the strongest loadings that were consistent across all three facilities, resulted in a final 10-item CFS using Cronbach's alpha of .89. This new 10-item CFS provides nursing the ability to measure caring as a concept through the lens of caring science and the caritas processes (DiNapoli et al., 2010). Additional research for the revised 10-item tool is needed.

For this DNP project, this author focused on the nurse's individual perception of his or her caring attributes or behaviors using the CFS-CPV each of the studies reviewed cited the need for additional work focusing on the relationship to caring behaviors or intentional nursing

practices and the impact for both the nurse and the patient. This DNP project examined the impact of a standardized Caring Science/Heart Science experiential learning series presented at three of the 21 medical centers within this large, multi-site organization. The series explored the relationship of the nurses' personal perceptions of their caring behaviors and the patients' reporting of being treated with loving kindness and examined the differences of those medical centers that do not have a Caring Science/Heart Science educational intervention.

Research has shown that when nurses are able to engage in meaningful relationships with their patients and their families, they have purpose and satisfaction in their jobs (Pavlish & Hunt, 2012). The sponsoring organization supports and endorses this work to honor, frame, discuss, develop, and advance the art and science of the professional nurses within the organization (see Appendix B for Letter of Support).

Rationale and Framework

Caring is the essence of professional nursing practice; it is through the acts of caring and engaging in authentic, caring, humanistic encounters that nurses find their professional identity. Caring science connects the nurse, patient, family, and members of the healthcare team by engaging in authentic, human caring relationships and by honoring the very humanity of the patient and their family (Watson, 2008).

Historically, caring science education was developed at the regional level by regional educators and caring science leaders. The education was primarily focused on educating clinical leaders, such as chief nurse executives (CNEs), clinical directors, managers, and assistant managers, to establish the organization's leadership foundational understanding of this new theory-based professional practice. The expectation was that the local site leaders would be responsible for disseminating the caring science information to the bedside nursing staff.

Between 2013 and 2018, this organization experienced a significant turnover of all levels of nursing leadership. The impact of this level of leadership turnover has limited the consistent and sustainable caring science work to continue at the majority of the medical centers within the organization. The HCAHPS' results for the organization's focused statement, *Nurses provided care with loving kindness*, were assessed from 2015 through 2018 by each medical center. The results clearly indicated that while the organization has chosen caring science as their theory to guide the professional practice for nurses, the patients have not appreciated nor reported that it was their experience (see Appendix C). The custom HCAHPS question was an organization-specific assessment, which was added to the organizational review of the impact of the implementation of caring science in 2010.

Conceptual Framework

The conceptual framework used for this project was comprised of Dr. Jean Watson's (2008) theory of human caring/caring science, Dewey's theory of reflective thought and action – experiential learning (Miettinen, 2000), Rogers' (1995) diffusion of innovations, and the organization's national nursing professional practice model, all of which have been utilized in the program development and deployment strategy for this Caring Science/Heart Science educational series.

Jean Watson's Human Caring Theory – Caring Science.

Utilizing caring science as part of the conceptual framework for this DNP project supports the Northern California organization's affiliation with the Watson Caring Science Institute in providing a unified framework by describing nursing practice values and theoretical-based professional practice standards to guide nursing practice.

Dr. Watson's work emerged from her own personal journey to deepen her understanding of humanity and life itself and bring new meaning and dignity to the world of nursing and patient care. Human caring theory is informed by the works of philosophers Emmanuel Levinas, who explored the ethics of belonging to a universal spirit field of infinity, and Knud Logstrup's idea of transpersonal caring connecting and the ethical demand that we acknowledge that we hold another life force in our hands when we are caring for another human (Watson, 2008). The major concepts contained in Watson's caring theory are as follows:

- Relational caring as an ethical-moral-philosophical, value-guided foundation.
- Caring core: 10 caritas processes (previously 10 caritive factors).
- Transpersonal caring – the caring moment, the caring interaction between the patient and the nurse.
- Caring consciousness – intentional human presence.
- Caring-healing modalities.

Caring science and the ten caritas processes are the structural core providing a framework for nurses as they create a caring human experience (Watson, 2008). Watson's caring theory reminds and reinforces the nurse to hold caring central to every action and thought while practicing. Human caring theory is based on the belief that effective caring promotes health and healing for both the nurse and the patient (Watson, 2012). The caring theory, utilized to reconnect the nursing staff to the art and science of their professional nursing practice, illustrates how focusing on the caring behaviors and authentic practices of the nursing staff can improve patient outcomes, as well as elevate the nurse's personal and work satisfaction.

Kaiser Permanente's National Nursing Practice Model

The organization's national nursing practice model is based on a framework of delivering care with human dignity, comfort, and caring through relationships (Kaiser Permanente, 2016). Nurses provide care from a patient- and family-centric care perspective. Care is provided in a holistic manner that includes healing, empathy, and compassion, incorporating the science of nursing through critical thinking and evidence-based practices that are guided by research when caring for our patients throughout the continuum of care (Kaiser Permanente, 2016). The national nursing practice model provides a framework to ensure that nursing practice and care within the organization are consistent, regardless of where the care is delivered within the organization.

John Dewey's Theory of Reflective Thought and Action – Experiential Learning

Developing the Caring Science/Heart Science experiential learning based on the Caritas Coach Education Program (CCEP) experiential learning program correlates beautifully with Dewey's theory of reflective thought and action – experiential learning, which is based on three assumptions:

- People learn best when they are personally involved in the learning experience.
- Knowledge has to be discovered by the individual learner in order to have a significant meaning to the individual or to make a difference in the individual's behavior.
- A person's commitment to learning is highest when that person is free to set his/her own learning objectives, and the individual has the ability to actively pursue those objectives within a given framework. (Miettinen, 2000).

Dewey's theory focuses on harmonizing the learning experience for the participant, as well as for society, allowing the participant to be released from the tedium of conservative learning in favor of the enjoyment of variety and creative action. This allows for the expansion of

meaning and enhances the individual's appreciation for his or her own circumstances within the human culture at large (Miettinen, 2000). Dewey's experiential learning model is an empirical method that is tied to an examination of the problematic situations, the gathering of relevant facts, and the imaginative and creative plans for possible solutions (Miettinen, 2000). This model examines how learnings transform the participants' impulses and desires about a concrete experience into a higher-order, purposeful action (Miettinen, 2000). Dewey's theory of reflective thought and action – experiential learning is the most appropriate learning theory for this DNP project, in that the Caring Science/Heart Science experiential learning series was developed to focus on reflective practices, such as journaling, personal application of caring science to the individual's personal practice, and the identification and capture of transpersonal nurse/patient encounters through caring moments (see Appendix D).

Rogers' Diffusion of Innovations Theory

The ability to maximize the adoption of evidence-based practices within healthcare can be challenging. Rolling out standardized toolkits or best practices within a large, multi-site organization needs to have a well thought out and intentional plan. For this DNP project, the author chose to use Rogers' diffusion of innovation theory as the implementation, integration, and adoption of the Caring Science/Heart Science experiential learning as part of the conceptual framework.

Diffusion of innovation was used as a theoretical framework by multiple disciplines, such as public health, communications, history, economics, technology, education, and nursing, as a model in the implementation of change. The diffusion of innovations theory seeks to explain how change is accepted by a population (Rogers, 1995). Understanding the distribution of adoption to innovation allows for a prediction of timeline and cost analysis when entering an

innovative change process. The main elements of Roger's (1995) diffusion of innovation theory include:

- Innovation: Idea or process that is perceived as new by an individual or unit.
- Communication channels: Communication created/shared with one another to reach mutual understanding.
- Time: Adopter categorization, rate of the adoption process.
- Social system: A set of interrelated units engaged in joint problem solving to obtain a common goal (see Appendix E for the schematic model).

Examining new and innovative processes in delivering the Caring Science/Heart Science program within the organization was important to the success in project implementation and sustainability. As described previously in the background section, historically, the caring science education program focused on the leadership level of the organization. The work was developed and disseminated by the clinical leaders based in the regional offices, and with considerable turnover in leadership positions, the content was inconsistently provided to frontline staff.

For this DNP project, the innovative approach that this writer and the organization's caritas coaches implemented was to co-create the content at the grassroots level and deliver the Caring Science/Heart Science experiential learning modules with the goal of reconnecting the nursing staff to the essence of their professional nursing practices. Offering the Caring Science/Heart Science module series as an optional learning series allows staff who are intrinsically drawn to this work become the early adopters. Three early adopter medical centers within the organization were able to engage staff in creating a common interest or goal and participating in this experiential learning series, which focused on caring practices and behaviors

that focused on engaging in authentic, caring, humanistic encounters, enhancing the nurse's professional identity.

Project Aim

Patient care experience reports and quality outcome data suggest that the top-down, regional, tool-box education approach, which this organization typically utilizes, has not made any significant impact on the bedside nurses' understanding or enculturation of caring science into their individual nursing practice. To move this much-needed work forward, another approach was sought. As part of the organization's Northern California patient care services leadership strategic plan, the approach was to align the multiple initiatives within the organization under the foundation of caring science, essentially linking the *why* we do to the *what* we do.

Aim Statement

By September 2019, develop, implement, and evaluate the standardized Caring Science/Heart Science education program using the CFS-CPV and, nursing quality outcomes for those medical centers who participated in this DNP project. The Caring Science/Heart Science educational program will be offered and delivered by the *caritas* coaches within a minimum of three medical centers within a large, multi-site healthcare organization in Northern California.

Section III. Methods

Context

The Caring Science/Heart Science experiential education program was developed with the intent to reconnect the nursing staff to the essence of the professional nursing practices. Caring science honors the whole being, which includes the mind, body, and spirit. Caring science provides nurses with a deeper understanding of honoring the sacredness of caring for patients by engaging patients, families, and co-workers in creating authentic, caring-healing practices, and environments. The organization, in collaboration with Dr. Watson and HeartMath, brought the caritas coaches and HeartMath trainers together to enhance the caring science education, incorporating specific HeartMath evidence-based practices into the caring science education program. The HeartMath practices provide staff the tools to understand the heart connection in identifying and sustaining positive emotions, such as love, gratitude, and appreciation of the healing capabilities for self and others (McCraty & Childre, 2004). The HeartMath practices that were integrated into the caring science education were the Quick Coherence (McCraty & Childre, 2004), Energetics of Communication (McCraty, 2004), and Freeze Frame (Childre & Rozman, 2005) tools. HeartMath practices focus on generations of positive emotions that create an emotional shift to one of calm, ease, and presence, which allows nurses to engage in a more authentic, caring relationship with self, patients, and their care team (McCraty & Childre, 2004).

Integration and co-creation of a consistent and unified message—one unified voice—for clinical nursing practice throughout the organization's Northern California medical centers was a key strategy to transform and empower the professional nurse to own his or her practice. The Caring Science/Heart Science education program incorporates the organization's national professional practice model, Dr. Jean Watson's theory of human caring, the evidence-based

fundamental of care experience, and the evidence-based practices of HeartMath. This framework was created to align the multiple initiatives within the organization to bridge the nursing vision, values, and professional practice model together. This experiential series provides the nursing staff an opportunity to enhance and reinforce their perception of meaningful work as part of the adoption of caring science as the foundational theory-based practice.

The key stakeholders for this project were identified as the caritas coaches and HeartMath trainers within the organization, the regional director for professional practice who guides and leads the organization in the strategic planning in relationship for professional practice development within the organization, hospital-based care experience leaders who assist with the performance improvement efforts as they relate to the care experience for our members within the organization, staff nurses, and the patient advisory council teams within the organization. A core group of approximately 20 caritas coaches self-selected to participate in the co-creation of the module content. The goals of the group were based on the work of Dr. Jean Watson and focused on educating the nursing staff toward theoretical practices based on human caring values while delivering care within the organization. The Caring Science/Heart Science experiential learning series was developed using Dr. Jean Watson's theory of human caring, primarily Dr. Watson's 10 caritas processes, which provide the framework to hold the discipline and profession of nursing (Watson, 2008). The 10 caritas processes are the foundation for the learning modules for staff and leaders within the Northern California medical centers of this organization, based on a moral, ethical foundation serving as a compass for staff to appreciate that when we care for our patients, we care for their families and our community (Watson, 2008).

Interventions

This DNP project intervention focused on connecting the dots of the multiple initiatives for the staff at the bedside through caring science as the foundation for professional practice. This was actualized through the utilization of caritas coaches within an organization that is deeply committed to the advancement of caring science. Each of the medical centers has at least one caritas coach who has completed an extensive, six-month caring science experiential certified training provided by Dr. Jean Watson's organization, Watson Science Caring Institute. This program prepares the caritas coaches to be content experts in caring science and to be a resource and a facilitator for this work at their local medical centers.

In November 2016, the organization's Northern California caritas coaches came together and set the vision for deepening the integration of caring science into the everyday practices of the nursing staff within the organization. An assessment of all the current caring science education from each of the 21 medical centers was collectively reviewed and revised based on current evidence-based practices and the evolution of Dr. Jean Watson's theory of human caring.

The Watson Caring Institute's CCEP was used as an experiential guide in the design plan for the educational series to allow staff to deepen their understanding and enculturate caring science into their professional practice framework. This experiential learning series was developed to provide the nursing staff a theoretical guide and to aid in establishing a common language, allowing them to see, act on, and reinforce authentic practices that enable the nursing staff to develop their caring attributes, moving them from *being* to *becoming*. The four modules and their foci are:

- Module 1: The Caring Connection – Foundation of caritas process.
- Module 2: Being and Becoming – Taking care of self and other.

- Module 3: The Healing Environment – Providing care to our patients and members.
- Module 4: Caritas Consciousness – Evolving our care environments.

The goal of this work was to co-create, develop, and deliver the *Enhancing Our Culture of Caring* experiential learning series within a large, multi-site organization. This education series enables professional nurses to reflect on the value of expressing caring behaviors as they care for their patients and to strengthen their own purpose and resolve.

Exploring options in the implementation process for the Caring Science/Heart Science module series was discussed at the caritas coach meeting. Three options were identified based on the current organizational climate and a desire to have some flexibility in the scheduling process for the experiential learning series.

Option 1

The first option was to not provide any caring science education/professional practice education for the bedside staff, which would result in no active intervention to enhance the value of expressing caring behaviors of the nursing staff as they care for their patients and strengthen their own purpose and resolve.

Option 2

The second option was to schedule nursing staff who are participating in the nursing practice councils within the organization's medical centers to attend the *Enhancing Our Culture of Caring* experiential learning series. This approach would expose a designated group of bedside clinical leaders to the foundations of caring science, along with the organization's professional practice standards.

Option 3

The third option was to have the *Enhancing Our Culture of Caring* experiential learning modules available to staff within the medical centers. The staff would be instructed to use their education leave hours to attend. This option gives staff who are truly heart-centered the opportunity to apply their intrinsic passion for this work and to discover the ability to engage with their patients and create caring moments that are critical to a healing environment for self, patient, families, and their peers.

The original plan for the implementation of the Caring Science/Heart Science experiential learning series was to adopt Option 3. However, Medical Center A implemented the program utilizing Option 2. While this was not the original agreed-upon plan among the caritas coaches within the organization, this approach is in alignment with theories identified within the conceptual framework for this DNP project.

Gap Analysis

In 2010, the theory of human caring, or caring science, was chosen as the theoretical foundation for professional nursing practice to be utilized within a multi-site healthcare organization in Northern California. Multiple educational programs and in-services have been developed and delivered throughout this large, multi-site healthcare organization for staff and leaders. Despite the best efforts of clinical educators and caritas coaches who have participated in the delivery of the content at the various medical centers, the organization has not appreciated the anticipated gains in the professional practice development of the nursing staff and the care experience scores within the organization have remained flat.

In preparation for this DNP project and in reviewing research and evidence-based practices, it was found that there was limited literature available specifically focusing on caring

science educational programs utilized as an intentional intervention to inform and influence caring behaviors while caring for patients within a healthcare environment. Although multiple survey tools exist that assess the caring behaviors based on the patient's perception, there are limited tools that examine the nurses' perception of their caring behaviors and their personal, professional practice as it relates to caring science or relationship-based care and the change in clinical practice post-intervention. This identified gap, through this change of practice project, was being addressed as the organization continues to advance the art and science of the nursing staff through deepening their understanding of the theory of human caring, engaging their hearts and minds, and deepening their understanding of the theory as the foundation for all professional nursing practices.

A desire to understand the impact of this work on a large, multi-site organization and the currently limited literature examining nurses' perceived caring behaviors following an intentional caring science education program led to the co-creation and delivery of a standardized Caring Science/Heart Science education program. Based on the information identified in the gap analysis details outlined in Appendix F, this writer, along the director for professional practice for this organization, established a focused recruitment plan for new caritas coaches from identified key roles outlined in the gap analysis. Over this project's 1-year implementation, two CNEs, one associate CNE, and three care experience leaders completed the CCEP certification program. Each of these new caritas coaches assisted in the implementation of the Caring Science/Heart Science learning modules within their specific medical centers.

GANTT Chart

Planning and coordinating this multi-site education program required strategic planning and established timelines to ensure successful implementation and evaluation of the impact of

the Caring Science/Heart Science education program on the nurses' personal perception of their caring behaviors and on the patients' perception of being cared for with loving kindness.

In September 2018, the final Caring Science/Heart Science content was approved by the caritas coach team, following the integration of HeartMath content and in consultation with a master trainer from HeartMath. In consultation with this project, an organizational sponsor of the CFS-CPV tool was chosen. The survey tool, Caring Science/Heart Science content review, and educational hub system was developed at a regional caritas coach meeting in September 2018. The rollout of the Caring Science/Heart Science classes began in November 2018, with dates chosen by the caritas coaches who requested to be early adopters of this content. The Caring Science/Heart Science program plan and timeline were developed to provide a guided timeline for the implementation of this experiential learning series as a foundational, systematic educational plan for the organization and as this writer's DNP project (see Appendix G).

SWOT Analysis

Given the various approaches the organization has done to enculturate caring science into the professional nursing practice within the organization, a strengths, weaknesses, opportunities, and threats (SWOT) analysis was completed prior to the implementation of the Caring Science/Heart Science education modules for this multi-site medical center organization (see Appendix H).

This organization has been on the journey of utilizing Dr. Jean Watson's theory of human caring since 2010. The strengths in the implementation of this Caring Science/Heart Science educational program was that this organization has worked in collaboration with Dr. Jean Watson and with HeartMath master trainers and the caritas coaches in the co-creation of this educational series content. To increase the ability to ignite the RN's personal passion through linking purpose

to practice, elevating the professional practice for the bedside staff was the opportunity for the organization in the implementation of this Caring Science/Heart Science experiential learning series.

The prevailing weakness that continues within the organization is the CNE role turn over and, as with many healthcare organizations, these organizations focus on the business or economic models with their emphasis on census instead of patients and on technology instead of on touch or human connection. The continued opportunity ensure that this Caring Science/Heart Science work will continue within the organization by having the regional caring science director along with a HeartMath master trainer meet with each new CNE, orienting them to the Caring Science/Heart Science work within the organization and providing them with resources and tools for their own personal resilience as they begin their new role.

Work Breakdown Structure

The Caring Science/Heart Science education series was co-created, and the education rollout plan was developed by the caritas coaches. Moving the ownership of this work closer to the leaders (caritas coaches), who have a committed investment with their local medical centers and the staff, was truly a new and innovative approach for this organization. A copy of the detailed work breakdown structure demonstrating elements of Rogers' innovation theory is provided in Appendix I. Each key stage of the Caring Science/Heart Science program and cascading processes have been outlined. The key items are:

- Educate the caritas coaches on the revised Caring Science/Heart Science content with the inclusion of the HeartMath practices.
- Gather the baseline HCAHPS data *nurses treated me with loving kindness* for each medical center.

- Choose the survey tool to assess the nurses' caring behaviors pre- and post-education intervention.
- Establish the Caring Science/Heart Science education scheduling and continuing education process for this work.
- Develop the class location hub system to allow staff flexibility in where they can take the Caring Science/Heart Science education program.

The Caring Science/Heart Science experiential learning series was delivered at three of the 21 medical centers in face-to-face, 4-hour sessions led by the caritas coaches within the organization. The two 4-hour sessions combining Modules 1 and 2, and Modules 3 and 4 were designed to facilitate the nursing staff's ability to utilize their education leave to attend the Caring Science/Heart Science program. The caring science program director identified 15 caritas coaches as core trainers. These core trainers were involved in the Caring Science/Heart Science content co-creation. The core group trainers, along with the program director, led the initial program rollout within the organization. This process was designed to ensure consistent delivery of the module content.

Communication Plan

The communication plan for program development, implementation, and ongoing evaluation took place in one-on-one meetings with the program sponsor and University of San Francisco (USF) facility advisor, caritas coach group meetings, and electronic communications via emails with caritas coaches, as the program progressed within the organization (see Appendix J).

The project target population was RNs who have voluntarily chosen to sign up for the education program. The education program was offered via the organization's electronic

education scheduling program, HealthStream. The Caring Science/Heart Science program was offered to the bedside clinical staff at the organization's 21 medical centers in Northern California. The inclusion criteria for this project included all RNs practicing at the bedside within the medical centers who complete both sessions of the experiential module series.

Recruitment for participation was facilitated by the local caritas coaches at each of the medical centers by presenting the Caring Science/Heart Science module series flyers at huddles and staff meetings. Scheduled class offerings throughout Northern California were developed by the caritas coaches, and schedules were created and distributed within the medical centers. The regional caring science program director monitored the class registrations via the HealthStream system and reported registration progress to the local caritas coaches. Continuing education units were provided to the RN staff who attended the module sessions.

The caring attribute pre- and post-intervention tool was incorporated into the class registration process, with the course completion/evaluation process in HealthStream using Survey Monkey as the electronic survey platform. Both surveys were delivered in electronic form and were voluntary. The survey consisted of demographic data and a self-reflective, 10-item survey focusing on the caring behaviors of the individual nurse.

Budget

The project budget was broken down into three phases (see Appendix K).

Preparation Assessment

The preparation assessment included approval for the project, content refinement, orientation of the caritas coaches to the module contents, researching caring attribute tools and deciding on the tool that best represents the organization at this current time, and obtaining permission for the tools from the primary author used with this project. Salary costs were based

on an average hourly cost for the caritas coaches, which are typically an assistant nurse manager, manager, or educator. The cost of this phase was \$18,368.

Implementation

Implementation primarily focused on the implementation plan, scheduling process, and advertisement of the Caring Science/Heart Science modules at the local medical centers. This included the cost of the participants' classroom hours based on an average hourly rate for a Staff II RN within the organization. The initial implementation phase was the delivery of at least one cycle of the Caring Science/Heart Science education within the organization. The cost for the delivery of the content was based on the average caritas coach's salary and the average salary of an RN in the organization. The cost of the implementation phase included 206 RNs completing *Enhancing Our Culture of Caring* Module 1 and Module 2, and 99 RNs completing Module 3 and Module 4 from three medical centers within the organization. The total cost for this implementation phase was \$255,655.

Evaluation Presentation

Evaluating the presentation focused on the data collection of the CFS-CPV and HCAHPS pre- and post-intervention survey results and concluded with a final assessment of the program's impact on the nurses' caring behaviors and the patients reporting of being cared for by the nursing staff within the organization. This cost was the student's salary, total time entering data from the CFS-CPV tool and gathering HCAHPS data for each of the medical centers, and analysis and interpretation of the identified test. The total cost of this evaluation process was \$4,410.

Total Costs

The total cost for this project was \$278,437.

- Option 1: Without the implementation of the Caring Science/Heart Science work, there was no training cost to the medical center who chose not to participate. However, the cost to the organization with potential decrease in patient satisfaction scores and increase in patient harm outcomes could be significant.
- Option 2: 60 RNs completed Module 1 and Module 2, and 48 RNs completed Module 3 and Module 4 with replacement.
- Option 3: 146 RNs completed Module 1 and Module 2, and 51 RNs completed Module 3 and Module 4.

Cost Avoidance Analysis

When authentic caring is not present within the organization, non-caring consequences potentially lead to patient harm. In 2010, the U.S. Department of Health and Human Services identified the rate of harm among hospitalized Medicare patients at 27% (AHRQ, 2015).

The cost avoidance for the *Enhancing Our Culture of Caring* experiential learning series was based on creating a culture where caring behaviors and authentic healing practices contributed to the safety, quality, and satisfaction of the care being delivered within this large, multi-site organization. In our value-based culture, providing resources or tools that link purpose to practice prevents problems, improves quality, and has a high potential to decrease unnecessary costs due to medical risk occurrences (AHRQ, 2015).

Analysis of the cost avoidance consisted of reviewing the nurses' CFS-CPV survey results with the quality and risk data from one of the medical centers that participated in this comprehensive project (see Appendix L). Standardized quality and patient safety best practices within this large, multi-site organization are set regionally to ensure overall success was met at the local, state, and national levels. Appreciating the standardized nursing quality indicators and

safety practice model and assessing the staff's self-identified caring attributes using the CFS-CPV Caring Science/Heart Science experiential learning series in evaluating the intent to shift the staff from task to purpose, the patient quality and safety gains identified at the one medical center were applied to calculate the overall cost avoidance for this DNP project.

Study of the Intervention

The Caring Science/Heart Science experiential learning series was developed to provide the nursing staff a theoretical guide, establishing a common language allowing them to see, act on, and reinforce authentic practices that enable the nursing staff to develop their caring attributes, moving them from *being* to *becoming*. Understanding the impact of this DNP project consisted of a review of anecdotal written comments retrieved from the participants' post-evaluation, completion of the pre- and post-CFS-CPV tool, review of the organization's custom HCAHPS question data pre- and post-intervention, and review of the nurse quality indicators outcomes.

Implementation Plan and Timeline

The original plan was to implement the Caring Science/Heart Science experiential learning series in 10 of the 21 medical centers from January through September 2019. The projected implementation plan anticipated the Caring Science/Heart Science experiential learning series would be delivered quarterly at 10 of the 21 medical centers. The anticipated 10 medical center participation versus the actual three medical center participation was related to organizational priority shifting and external influences that limited caritas coach and staff participation, so the scheduled quarterly class schedule offering was modified.

The RNs participated in face-to-face, 4-hour sessions led by the caritas coaches within the organization. The two, 4-hour sessions combining Modules 1 and 2, and Modules 3 and 4

were designed to facilitate the nursing staff's ability to utilize their education leave to attend the Caring Science/Heart Science program. The caring science program director identified 15 caritas coaches as core trainers. These core trainers were involved in the Caring Science/Heart Science content co-creation. The core group trainers, along with the program director, led the initial program rollout within the organization. This process was designed to ensure consistent delivery of the module content. See Appendix M for the learning objectives of the four modules. This DNP project was successfully implemented at three of the 21 medical centers within this large, multi-site organization over nine months.

Tools

Assessing and evaluating the impact of the Caring Science/Heart Science education program on the nurses' perception of their caring behaviors, both pre- and post-intervention were assessed utilizing the CFS-CPV developed by Drenkard et al. 2006 (in Johnson, 2012). The initial CFS was comprised of 20 items and later modified to a 10-item tool developed to measure the perception of caring behaviors by employees who interact with patients within healthcare. The tool was designed to measure the caring behaviors based on the 10 caritas processes identified in Dr. Jean Watson's theory of human caring. Each of the 10 caritas processes and the nurses' self-reflection of their individual caring behaviors are identified within the CFS-CPV survey. The CFS-CPV was chosen for this project as it allows the nurse to personally reflect and assess his or her caring attributes in relationship to Dr. Jean Watson's 10 caritas processes. The modified CFS-CPV consists of a 10-item survey using a 7-point Likert scale (see Appendix N for a copy of the CFS-CPV pre-survey and the participant notification statement). The post-survey is identical to the pre-survey.

The patient's perception of being cared for was evaluated pre- and post-intervention by reviewing the organization's customized HCAHPS question *Nurses treated me with loving kindness*. The HCAHPS is a standardized survey used to collect data and measure the patient's experience in the hospital.

Data Reporting

Prior to the implementation of the education series, the survey tool was loaded into the organization's educational training system, HealthStream. The post-survey was loaded into HealthStream as part of the course evaluation for the second session, which included the remaining two-course modules. The course evaluation and post-survey were optional and voluntary. Continuing education units were awarded to the RN staff for attending and participating in each of the Caring Science/Heart Science sessions. A summary of key considerations includes the following;

- Surveys loaded into HealthStream via a Survey Monkey link.
- Participation in education intervention was on a voluntary basis.
- Nurses must complete the entire module series to participate in the survey process.
- RNs completing the pre- and post-intervention survey were included in the aggregate data review and survey analysis.
- The HCAHPS question *Nurses provided me care with loving kindness* data were reviewed pre- and post-education intervention as aggregated data by the medical center. No specific patient verbatim comments were collected or included as part of the data review process.

Analysis

The aggregated data were reviewed and assessed from the three medical centers that successfully completed both of the Caring Science/Heart Science experiential learning sessions, along with the completion of the pre- and post-intervention caring attribute survey using the CFS-CPV tool from participating medical centers. The data for the CFS-CPV were analyzed using the Survey Monkey analyzing program, which took the weighted averages for each of the 10 survey questions identified in the CFS-CPV for both the pre- and post-intervention surveys. A longitudinal comparison was made for each of the medical centers, as the CFS-CPV tool responses provided two points in time (see Appendix O).

The three participating medical centers' HCAHPS data were extracted from the organization care experience program's database, and the data were compiled as aggregate data by the medical centers assessing the two HCAHPS caring science custom questions from January 2019 to current data alongside 2018. Data were reviewed and assessed for changes based on the patient's perception of authentic caring (see Appendix P).

Ethical Considerations

The Caring Science/Heart Science experiential learning program was submitted to the organization's internal review board committee and was granted an exemption based on the focus of the work being a quality project. A Statement of Determination was submitted to USF and approved as a quality improvement project (see Appendix Q).

The CFS-CPV pre- and post-survey was delivered via Survey Monkey in electronic form and linked in HealthStream and was a voluntary process. The project's purpose and informed consent cover letter describing the purpose of the survey, with the intent of the work to evaluate the effectiveness of the course content and personal enculturation of the Caring Science/Heart

Science content and its impact on the nurses caring attributes, preceded both surveys. All participants were informed in writing that all data obtained would be confidential, that all data received would be reviewed as aggregate data by the medical center, and that all data collected would not be linked to any specific nurse. The survey consisted of a 10-item survey focusing on the caring behaviors of the individual nurse. The participants were informed in writing that they could choose to not participate in the survey process and still register for and attend the Caring Science/Heart Science education sessions. All data obtained from the CFS-CPV and HCAHPS were compiled and were reported as aggregate, blinded data by the medical center, and scrubbed of any confidential identifying data.

Recognizing our connectedness to humanity, this intentional focus aligns with the American Nurses Association (2017) Code of Ethics and the Jesuit values (USF, 2018), both focusing on the human dignity through a culture of service for humanity, nurturing the whole person, compassion, and having concern or regard for others. The core content of the Caring Science/Heart Science series is identified in the detailed list of goals below.

- Care focused on professional practice based on morality-ethics-values.
- Shift from a mechanical-cure approach to spiritualizing of health and healing processes.
- Move from rote, atheoretical professional routines to a nursing practice based on intentional caring-theory-guided professional actions.
- Move from institutional environments to healing environments. Understand that the nurse is part of that healing environment.
- Focus on the covenant of caring for a human soul.

- Move beyond industrialized managed care to the relationship-centered caring-healing partnership with the patient and families. Recognize the whole patient and their support system as part of the caring-healing process (Watson, 2016).

Section IV. Results

The results of the pre -and post-CFS-CPV tool provide evidence of the project having achieved its aim of providing an evidence-based intervention that enabled the participants to provide the nursing staff a theoretical guide, establishing a common language, allowing them to see, act on, and reinforce authentic practices that enable the nursing staff to develop their caring attributes, moving them from *being* to *becoming*. Appendix O demonstrates the pre- and post-intervention RNs' self-caring attribute assessment for the three medical centers using the CFS-CPV tool. The CFS-CPV post-self-assessment was completed after the conclusion of both Module 3 and Module 4, the second session of this module series. A minimum of two weeks between Module 1/Module 2 and Module 3/Module 4 was designed to provide an opportunity for participants to reflect on and enculturate learnings and experiential reflective principles into their clinical practice. The CFS-CPV tool provided a simple comparison of the participants' aggregated data for each of the medical center's pre- and post-intervention. Each of the three medical centers appreciated a positive shift for each of the 10 items identified on the CFS-CPV tool.

Consistent with the CFS-CPV data, the staff's anecdotal written comments on the overall course evaluations reinforced the value of providing experiential learning sessions to realign purpose to practice. Retrieved comments demonstrated their enculturation into practice, with statements, such as:

- Take time to know your patients. Find common ground with your patients. Take care of yourself in order to give better care to your patients.
- Importance of self-care and the quick tips to start changing my biochemistry when presented with a stressful situation.

- Practical tools for maintaining self-care, deepening a practice for emotional authenticity, and opening to spirit in coming alongside the person I'm here to provide care for in a loving way.
- Caring science is beneficial TO BOTH PATIENT AND THE CAREGIVER.
- I plan to integrate some of these theories and concepts into my everyday work in hopes of bringing about more positive patient care experiences.
- Applying what I have learned/practicing and living a lifestyle of caring and nurturing.

The HCAHPS caring science custom questions developed by this large, multi-site organization examined the patient’s reported experience of the nursing care, specifically focusing on the caring attributes demonstrated by the clinical nurses (see Appendix P). A comparison of the patients’ reported *Nurses provided care with loving kindness* performance YTD 2018 to June 2019 for each of the three medical centers was completed (see Table 1).

Table 1

2018 YTD Compared to June 2019 HCAHPS Caring Science Custom Question: Nurses Provided Care with Loving Kindness

Location	2018 YTD % Agree with Statement	June 2019 % Agree with Statement
Medical Center A	74.6	76.5
Medical Center B	71.8	72.4
Medical Center C	72.5	71.1

While there was a slight improvement in the patient’s perception of being cared for with loving kindness, the overall sample of 206 RNs for Module 1 and Module 2 and 99 RNs for Module 3 and Module 4 is a very small sample for three medical centers to effectively measure significant changes.

Section V. Discussion

Summary

The project aims for this DNP project was to develop, implement, and evaluate a standardized Caring Science/Heart Science experiential education program offered and delivered by the caritas coaches within a large, multi-site healthcare organization in Northern California. The project was successfully achieved. The overall goal of this DNP project, in conjunction with Northern California patient care services leadership, was to develop a strategic plan to bridge the nursing vision, values, and professional practice model together. This experiential series provided the nursing staff an opportunity to enhance and reinforce their perception of meaningful work as part of the adoption of caring science as the foundational theory-based practice, aligning the multiple initiatives within the organization under the foundation of caring science, essentially linking *why* we do to *what* we do. This educational series enabled professional nurses to become inspired and to ignite the RNs' personal passion through linking purpose to practice by reflecting on the value of expressing caring behaviors as they care for their patients and strengthen their own purpose and resolve.

The greatest contributor to the success of this project was the caritas coaches who co-created the learning modules. Collectively, the caritas coaches established the platform in which these experiential learning modules were delivered within the organization, recognizing the need to creatively offer these classes without due hardship on the organization's overall staffing. The caritas coaches within each of the medical centers, along with the regional caritas coach, partnered in the delivery of the module content to establish a consistent and unified message—one unified voice—for nursing clinical practice throughout the organization's Northern

California medical centers, which was a key strategy to transform and empower the professional nurse to own his or her practice.

Watson's caring theory reminds and reinforces the nurse to hold caring central to every action and thought while practicing. The human caring theory is based on the belief that effective caring promotes health and healing for both the nurse and the patient (Watson, 2012). The caring theory, utilized to reconnect the nursing staff to the art and science of their professional nursing practice, illustrates how focusing on the caring behaviors and authentic practices of the nursing staff can improve patient outcomes, as well as elevate the nurse's personal and work satisfaction.

The outcome data from the CFS-CPV tool obtained from each of the three participating medical centers provide evidence of the project having achieved its aim of providing an evidence-based intervention that enabled the participants to provide the nursing staff a theoretical guide, establishing a common language allowing them to see, act on, and reinforce authentic practices that enable the nursing staff to develop their caring attributes, moving them from *being* to *becoming*.

Interpretation

The anticipated ten medical center participation versus the actual three medical center participation was related to organizational priority shifting and external influences that limited caritas coach and staff participation. The evidence supports that when nurses practice caring behaviors with their patients, it creates a positive work environment, thus increasing job and patient satisfaction and quality of care. This DNP project demonstrated outcome data from the CFS-CPV, and the nursing quality outcome data support the continued implementation and spread of the Caring Science/Heart Science experiential learning series. The actual financial costs for this program were accurately estimated and, based on the improved quality outcomes

that were appreciated at Medical Center A, and there may be significant savings through cost avoidance.

Limitations

Over the past few years, this large, multi-site medical center organization has experienced significant leadership turnover, specifically at the CNE level. This level of leadership turnover is a major weakness in the successful implementation of this program, due to the lack of caring science orientation provided to the CNEs at onboarding. Without CNE support of this work, there continues to be difficulty obtaining the authorization for release of the caritas coaches to teach the content and difficulty for staff to attend the program.

Threats to the successful implementation and the expected elevation in the professional practice standards of the nursing staff and enculturation of the Caring Science/Heart Science content into their personal practice lies with the organization's ability to embrace and support this innovative experiential learning series. The continued inability to sustain stability with the CNE role within the organization hampers the forward progress of caring science work within the organization. The current experience is with each CNE turnover within the medical center, and there has been a significant loss of focus and support for caring science. The focus typically shifts to a more financial process or performance-based metric.

The organization's ability to demonstrate the effect of this experiential series on the nurses' caring behaviors may be due to the additional limitations identified below.

- Limited class enrollment due to RN staff's inability to get time off to attend the Caring Science/Heart Science education series due to increased patient volumes.
- RNs' choice to use their education leave for other programs, such as home study.

- RNs not identifying themselves as RNs on the survey forms, decreasing the total RN aggregate data.
- Caritas coaches, who often have additional jobs at the medical centers, have difficulty finding the time to promote caring science opportunities.
- HCAHPS data, *RN treated me with loving kindness*, has an approximate two-month data lag. This data lag may limit the ability to establish a correlation or impact of the Caring Science/Heart Science education series to the patient's perception of caring relationships with the RN staff.

Conclusions

Integration and co-creation of *one voice* for nursing clinical practice was a key strategy to transform and empower the professional nurse to own his or her practice. The Caring Science/Heart Science education series incorporates the organization's national nursing professional practice model and the fundamentals of care experience to align all of the programs to caring science and *connect the dots* of the various initiatives back to caring science as a foundation for the staff, providing them an opportunity to enhance and reinforce their perception of meaningful work through applying caring science theory and HeartMath's heart-centered practices. The educational series was comprised of modules, with an overarching title of *Enhancing Our Culture of Caring*. This project allows the organization to assess the value of the Caring Science/Heart Science education program in relationship to the RNs' personal perception of the impact of the education on their caring attributes, in conjunction with patients' perceptions of being cared for with loving kindness, as well as reviewing the quality and safety nursing indicators for each of the organizations and linking authentic caring practices to clinical outcomes.

The long-term plan post-DNP project is to have this module series continue to be offered at all 21 medical centers within the organization's Northern California medical centers over the next fiscal 2019-2020 year. The caritas coaches will continue to lead this Caring Science/Heart Science experiential learning series work, with the support and guidance from the regional caring science program director. The CFS-CPV survey will continue, and the individual hospital HCAHPS custom question will be reported, in conjunction with the CFS-CPV survey results, for each medical center to assess further enhancements and direction for this work. This information may provide qualitative data to reinforce the importance of RNs returning their practices to a holistic, humanistic covenant with patients. An impact for nursing may include how organizations orient newly-hired RN staff to the nursing culture and authentic care expectations within the organization. Additionally, this program may have a potential impact on the schools of nursing in terms of how we educate and link authentic, caring practices with the increased technology and fast-paced healthcare environment to sustain the core essence of our sacred practice of nursing—caring from a holistic, humanistic perspective.

Section VI. Other Information

Funding

This project was funded by the Kaiser Permanent Nurse Scholars Academy and is part of the continuing commitment to spread best practices across the organization. There was a collaboration of funding for participants' and trainers' time from the local facilities.

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Section VIII: Appendices

Appendix A. Research Review of Evidence

Citation	Conceptual Framework	Design/ Method	Sample/ Setting	Variables Studied and Definitions	Measurement	Data Analysis	Findings	Appraisal: Worth to Practice
Amendolair (2012)	N/A	Descriptive correlational study	1,091 random sampled medical-surgical nurses from North and South Carolina	<p>Correlation between Caring Efficacy Scale and Index of Work Satisfaction. To examine 3 questions:</p> <ul style="list-style-type: none"> • Ability to express caring behaviors using Caring Efficacy Scale and job satisfaction using the Index of Work Satisfaction, • Explore whether time with patients was a predictor to nurses’ ability to express caring behaviors, • If age, years in clinical practice, years working at current institution, and education influenced nurses’ ability to express caring behaviors and job satisfaction. 	A series of data analyses were performed using the SPSS. Surveys were then tallied and parametric statistics were used with the summed data.	<p>Analysis of the first research question established a positive correlation between caring efficacy and job satisfaction. Analysis of the second question found a significant value between time and caring. Mixed findings for the third question. Significant relationships between age, years of experience, years in present job, and position. Education was not significantly correlated to education.</p>	<p>This study found that participants who scored higher on their perceived ability to express caring behaviors also scored higher in their current level of job satisfaction.</p>	<p>Strengths:</p> <ul style="list-style-type: none"> • Large sample size of medical-surgical nurses. • Random selection in more than one hospital within 2 states. <p>Limitations:</p> <ul style="list-style-type: none"> • Limited publication research studies on the Caring Efficacy Scale. • Limited use in the acute care hospital setting. • Two questions on the Index of Work Satisfaction #29 and #36 have not been statistically explored using factor analysis. <p>Implication to Practice:</p> <ul style="list-style-type: none"> • Data supporting an environment that allows nurses to provide caring behaviors leads to

								<p>increased job satisfaction.</p> <ul style="list-style-type: none"> • Further studies examining nurses expressing caring behaviors with patients and work satisfaction and professional identity can be explored. <p>Implications for Practice.</p> <ul style="list-style-type: none"> • Research findings from this study may guide nursing leadership who are interested in linking purpose to practice and enhance job satisfaction. <p>Level IIB</p>
Asselin & Fain (2013)	N/A	Mixed-method testing, methods, instrument and intervention	Acute care nurses (<i>n</i> = 20) at 2 acute care hospital sites	Utilizing the Self-Reflection and Insight Scale (SRIS), a 20-item self-reported questionnaire measuring self-reflection and insight in adults. Additionally, a guided interview was conducted focusing on evaluating the program content, suggestions	Quantitative data demographic characteristics were analyzed for differences. Due to findings of differences in years in clinical experience, a two-way RM-ANOVA was	Quantitative results findings after multiple levels of data review indicated that nurses had significantly higher engagement in self-reflection scores immediately	Results of the study indicated that there is support in providing education for nurses learning reflective practices. The quantitative analysis did reflect a significant	<p>Strengths:</p> <ul style="list-style-type: none"> • SRIS tool valid. • Multiple review tests done to validate results. <p>Limitations:</p> <ul style="list-style-type: none"> • Small sample size. • Homogenous sample, Caucasian females. • Self-reported survey instrument

				for enhancements, and personal thoughts of any practice changes after attending the CE program.	completed. Additional review using the Bonferroni procedure was done to adjust for multiple comparisons.	post-program. Qualitative results identified responses to the survey questions were answered based on their clinical background or exposure. Clinical educators, supervisors, and managers chose clinical narratives focusing on the frustration with inability to lead and effect change, physician compliance and staffing, or emergent conditions. Staff nurses focused on patient advocacy and attending to patients emotional and spiritual needs.	change in the participants' engagement in self-reflection, but it did not impact their perceived need to reflect. Participating in the discussion allowed nurses to let go of situations they have been holding onto for an extended period of time. The ability to reflect and release may assist nurses to decrease burnout and increase job satisfaction.	and interview responses focusing on personal thoughts, feeling, and actions associated with clinical situations. Implications for practice: <ul style="list-style-type: none"> • Data support the need to explore ways to support reflective practice in nursing. • Further research is needed on this subject. Level II B
DiNapoli et al. (2010)	Human caring theory	Quantitative study	<ul style="list-style-type: none"> • Patients and families (n = 89) 	Exploratory factor analysis testing a 10-item caring factor	Using exploratory factor analysis,	The reliability factor for the revised 10	Results of this study validated that caritas can	Strengths: <ul style="list-style-type: none"> • Methodical analysis of original

			<ul style="list-style-type: none"> • Secondary analysis of nurses from three separate studies ($n = 450$) 	<p>survey scale and principle component factor analysis using ANOVA to evaluate any differences in data collected in the United States versus the data collected in the Philippines.</p>	<p>two versions of the Caring Factor 20-item survey were examined to identify the item with the strongest loading from either Model A or Model B, thus creating the revised Model C. Creating a reliable tool with an $\alpha = .95$.</p>	<p>items examining the caritas processes ranged from .833 to .891. The reliability of the final 10-item Caring Factor Survey, which used Cronbach's alpha, was .89</p>	<p>be measured using a revised, more succinct tool.</p>	<p>Caring Factor Survey tool to establish the revised 10-item Caring Factor Survey.</p> <ul style="list-style-type: none"> • Secondary nursing analysis assessed a diverse nursing population. <p>Limitations:</p> <ul style="list-style-type: none"> • No discussion of the specific principle component factor analysis. • $N=89$ patients small sample size. No indication of demographics. <p>Implications for practice:</p> <ul style="list-style-type: none"> • Provides a measurement tool for leaders and staff to assess and guide caring practices based in the Theory of Human Caring. <p>Level III C</p>
Duffy et al. (2007)	Human caring theory	Cross-sectional descriptive study	Convenience sample of adult patients at 5	Utilizing the revised Caring Assessment Tool (CAT) to provide insight into the	The revised 36-item CAT was tested for reliability using	The Cronbach α for the revised tool was .96, which validated	The revised CAT proved to be a valid and reliable	<p>Strengths:</p> <ul style="list-style-type: none"> • Large sample size. • Multiple site assessment of tool.

			<p>acute care institutions (<i>n</i> = 557)</p>	<p>patients' assessment of caring by nurses focusing of eight independent factors:</p> <ul style="list-style-type: none"> • Mutual problem solving, • Attentive reassurance, • Human respect, • Encouraging manner, • Appreciation of unique meanings, • Healing environment, • Affiliation needs, • Basic human needs. 	<p>data from 365 patients who completed all 36 items. Internal reliability was assessed using Cronbach <i>a</i>. Factor analyses were used to evaluate the construct validity of the Caring Assessment Tool.</p>	<p>the internal consistency of the shortened instrument. Testing for internal consistency of the independent factors, subscale analysis was performed. The coefficient <i>a</i> value of the subscales ranged from .757 to .917, demonstrating that each of the subscales work sufficiently well together to provide a good estimate of the factor they are measuring.</p>	<p>instrument that can easily be administered. The revised tool maintained a high overall internal consistency, creating an efficient method to measure nursing care.</p>	<ul style="list-style-type: none"> • Diverse ethnic backgrounds. • Multiple review tests done to validate results. <p>Limitations:</p> <ul style="list-style-type: none"> • Convenient sample limiting generalizability. • Homogenous sample, urban/suburban individuals. • No reporting of institution-specific characteristics, which may have altered the patient's responses. • Not all of the patients completed every item on the survey. <p>Implications to practice:</p> <ul style="list-style-type: none"> • The revised CAT, a valid and reliable instrument, is easily administered. • The 36 reduced tool enhances the likelihood of patient completion. • The independent subscales with high
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								<p>internal consistency allow for in-depth analysis of components of caring.</p> <ul style="list-style-type: none"> • Tool identifies the degree of nurse caring as perceived by the patient. <p>Level III B</p>
McClelland & Vogus (2014)	N/A	Cross-sectional study	Nonfederal acute care U.S. hospitals (n=269)	<p>Assessing comparative data from a five item Likert-type scale survey examining how compassionate care practices are recognized by the healthcare organization and HCAHPS results of the organization focusing on:</p> <ul style="list-style-type: none"> • Rate hospital • Willingness to recommend 	<p>Descriptive statistics and correlations. Weighted least squares regression analysis.</p>	<p>Compassionate practices were assessed using a 5-item Likert-type scale survey. Cronbach's alpha = .82. To ensure the compassionate practices were meaningful at the hospital level between hospitals, an ANOVA was completed using hospitals as the independent variable and compassion practices as the dependent variable $F = 3.26, p < .001$.</p>	<p>This study presents that patient perceptions of care quality are associated with organizational practices that recognize and reward employee compassionate practices.</p>	<p>Strengths:</p> <ul style="list-style-type: none"> • Study examined clear set of managerial actions to enhance patient's perception of care quality. <p>Weakness:</p> <ul style="list-style-type: none"> • Hospitals that participated in this particular study performed better on HCHAPS global measures. • Participants who completed the Likert-type survey were hospital executives. Their perceptions of organizational recognition for compassionate practices may be

								different than staff perceptions. Level III C
Papastavrou et al. (2010)	N/A	Meta-analysis of quantitative research	Quantitative research articles (<i>n</i> = 29)	Utilizing a checklist designed by the authors by which the research articles would methodologically be reviewed included: <ul style="list-style-type: none"> • Authors/dates, • Research hypothesis/aims, • Research instrument, • Sample/sampling method, • Findings. 	Meta-analysis review of comparative studies.	Following a 7-item yes/no checklist, narrative summary technique was utilized to report outcomes.	Findings from this meta-analysis indicated evidence of incongruence of perceptions between nurses and patients is supported in the majority of the studies. A few studies did support specific caring behaviors and the positive perceptions of caring as reported by patients.	<p>Strengths:</p> <ul style="list-style-type: none"> • Extensive and methodical meta-analysis of quantitative research focusing on caring attributes or behaviors of nurses and patients' perceptions of caring. • This comparative analysis contributes to empirical evidence specific to understanding the perceptions of nurses and patients about nurses' caring behaviors. <p>Limitations:</p> <ul style="list-style-type: none"> • The focus of this meta-analysis was strictly quantitative, additional learnings may have been appreciated if both quantitative and qualitative research had been reviewed.

								<ul style="list-style-type: none"> • Some of the studies reviewed had small sample sizes. <p>Implication to practice:</p> <ul style="list-style-type: none"> • Information obtained in this meta-analysis may be useful in planning educational programs for nurses and student nurses. • Further research is needed to guide evidence leading to improved outcomes in patients as a result of caring practices. <p>Level III B</p>
Pavlish & Hunt (2012)	N/A	Qualitative method of a narrative inquiry study	Acute care nurses (<i>n</i> = 13)	Utilizing a categorical-content method of narrative analysis, the interviews yielded 159 detail codes that were placed into five structural categories: <ul style="list-style-type: none"> • descriptors, • conditions, • impact of meaningful work, • meaningful nursing roles stories of 	A qualitative method of narrative inquiry was used to better understand the nurses' contextual realities.	Data from descriptors, conditions, consequences, and meaningful nursing roles were reviewed and recoded using Atlas.ti data management software.	Three primary themes emerged from 24 meaningful moments that were analyzed and categorized: <ul style="list-style-type: none"> • Connections, • Contributions, • Recognition. Participants described learning-	<p>Strengths:</p> <p>Rich descriptors of meaningful moments in the nurses' professional lives were retrieved from the interview process.</p> <p>Limitations:</p> <p>The sample size was very small; there was no clear description of the survey tool</p>

				meaningful moments.			focused environments, teamwork, supportive leadership, and the ability to spend time with their patients were facilitators to meaningful work.	<p>other than it being a narrative design survey; and there was no discussion of any reliability or validity testing.</p> <p>Implication to practice:</p> <ul style="list-style-type: none"> • Information gained from this study offers nurse managers guidance in analyzing factors and barriers to quality care and options for designing system wide solutions. • Understanding what descriptors and conditions that nurses identified as contributing to meaningful work can assist staff and leaders co-creating positive practice environments. <p>Level III C</p>
Persky et al. (2008)	N/A	Psychometric study	Nurses (<i>n</i> = 85) Patients (<i>n</i> = 85) Selected participants based on pre-	Nurse perception of job satisfaction using the Health Environment Survey in correlation with the patient's response to the Caring Factor	Quantitative and qualitative data about the nursing staff who received high scores on the patient-	Both instruments were linked to create a dyad of nurses who care for the patients. Correlation	<p>Nurses who were found to be caring by their patients were:</p> <ul style="list-style-type: none"> • Reported the greatest 	<p>Strengths: The Health Environment Survey instrument and the Caring Factor Survey instrument were both</p>

			<p>identified criteria:</p> <ul style="list-style-type: none"> • Medical-surgical patients who were hospitalized greater than 24 hours • Nurses who cared for the patient for at least one shift 	<p>Survey prior to education and implementation of relationship-based care model.</p>	<p>reported data CFS, indicating that this group of nurses were effective in caring behaviors. These data were compared to those nurses who received lower CFS scores to determine what made the difference.</p>	<p>tables were used using Pearson's <i>r</i> to identify demographic and environmental factors related to the Caring Factor Survey scores.</p>	<p>frustration with workload.</p> <ul style="list-style-type: none"> • Worked only their scheduled hours. • Most affected by stress in relationship with difficult patients. • Provided the most continuity of care with their patients. 	<p>found to have good reliability.</p> <p>Limitations: Caring attributes demonstrated by nurses is a relatively new area of study and the theoretical structures are not fully developed. The limited sample size required use of liberal statistical parameters.</p> <p>Implication to practice: Assisting educators in relationship-based care program design development, identifying and informing leaders of barriers brought forward by staff to optimize authentic caring, and creating caring competencies post-education implementation, guiding staff to restore valued practices of caring as viewed by our patients and families.</p> <p>Level IIIB</p>
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Appendix B. Organization Letter of Support

KAISER PERMANENTE

July 24, 2018

University of San Francisco
2130 Fulton Street

San Francisco, CA 94117-1080

To whom it may concern:

I am writing to express support for Linda Ackerman's proposed evidence-based practice and quality improvement project in partial fulfillment of her Doctor of Nursing Practice degree through the University of San Francisco's Executive Leadership DNP program.

The project, entitled Connecting the Essence of Nursing's Professional Practice through Caring Science/Heart Science: An Experiential Learning Series. The educational module series will focus on reconnecting the registered nurse to the art and science of our nursing profession. Moving beyond task-focused care to engaging patients, families, and co-workers in creating authentic, caring healing practices and environments.

This letter is to support Linda Ackerman RN, MSN to implement her DNP Comprehensive Project within the Kaiser Permanente Northern California medical centers.

Sincerely,

A handwritten signature in cursive script that reads "Priscilla S. Javed".

Priscilla S. Javed, RN, DNP, FACHE
Regional Director — Nursing Professional Practice
Patient Care Services, Northern California
Kaiser Foundation Hospitals/Health Plan

Appendix C. HCAHPS: Nurses Treated Me with Loving Kindness

Catalyst Percentile Trend by Units- <i>IP-A: Nurses provided care with loving-kindness</i>												
Sep 17, 2018												
Percentile Benchmark: NRC Benchmark	PY2015			PY2016			PY2017			PY2018		
	Positive	PR	n Size									
69.4			2,140	69.9		2,011	69.6		1,757	72.5	49	1,101
67.8			2,656	68.1		2,458	67.9		2,486	66.9	2	1,969
72.9			4,435	72.9		4,158	74.3		3,865	71.8	39	3,025
74.3			3,302	70.2		3,053	70.9		3,129	69.2	13	2,528
67.2			2,001	71.3		2,502	71.2		2,323	68.4	5	1,685
70.3			1,393	68.4		1,486	70.6		1,411	71.0	36	1,189
73.1			2,287	78.3		2,503	78.0		2,583	75.9	86	1,899
69.7			3,126	73.0		2,815	75.6		2,813	72.5	49	2,342
69.1			1,545	72.6		1,484	71.7		1,450	72.0	41	1,104
66.8			2,834	70.0		2,550	70.4		2,382	67.5	3	1,982
73.6			1,627	72.2		1,556	73.2		1,480	70.4	27	1,058
67.7			872	69.5		752	69.5		649	70.5	29	662
72.0			1,999	69.7		2,264	73.1		1,795	72.4	47	1,380
67.8			3,475	73.2		2,746	70.1		2,432	67.8	4	2,074
72.9			1,964	71.8		1,861	74.2		1,808	74.6	75	1,417
75.3			247	78.3		309	76.3		262	73.1	61	253
70.6			1,940	70.2		1,935	70.8		1,626	71.5	38	1,339
62.2			3,493	65.2		3,463	65.3		3,021	64.4	1	2,674
67.3			608	69.8		582	70.2		561	67.1	2	492
70.0			4,490	70.9		4,427	71.3		4,322	73.0	61	3,773
71.3			2,075	72.8		2,030	72.7		2,157	72.3	46	1,682

PR = Percentile Rank

μ - Warning: n-size is under 30!

Appendix D. Dewey's Experiential Learning Model

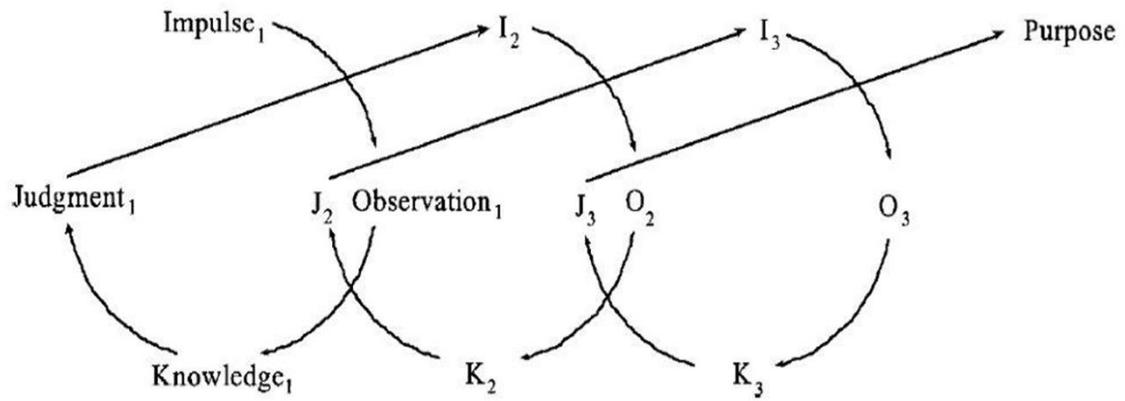
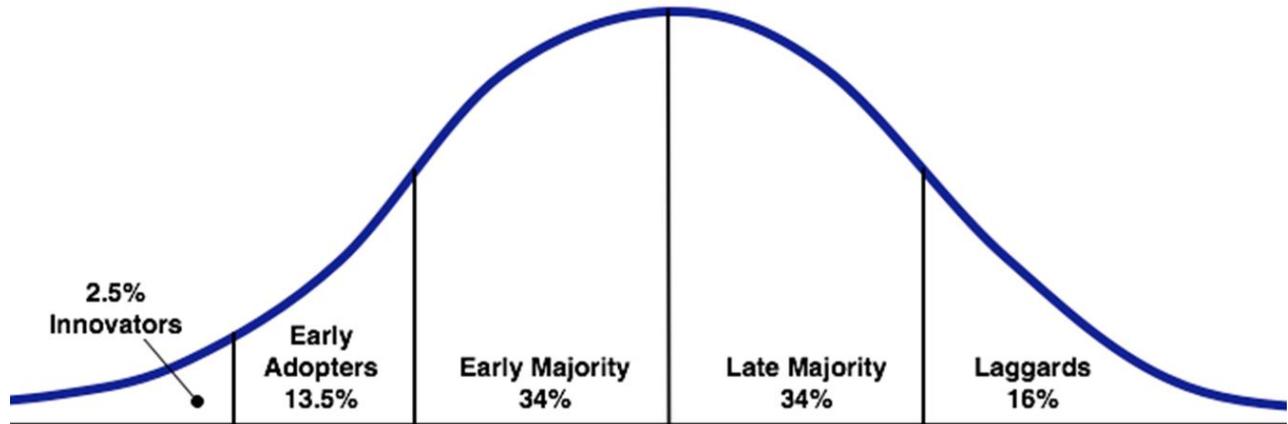


Figure 2. John Dewey's concept of experiential learning according to Kolb (1984: 23).

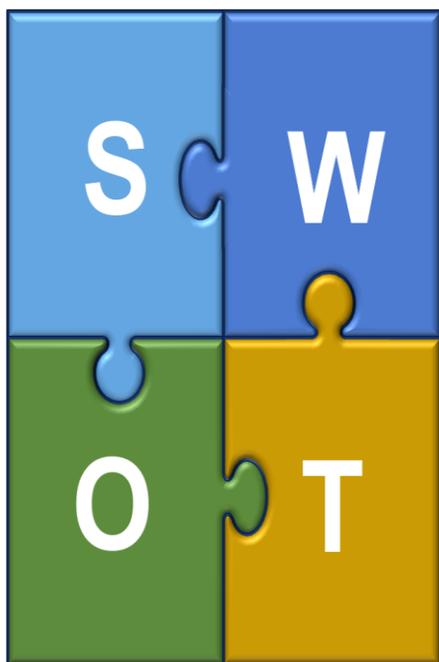
Appendix E. Rogers' Diffusion of Innovation



Appendix F. Gap Analysis

Current State	Gap	Desired State
<ol style="list-style-type: none"> 1. Non-standardized Caring Science education being delivered throughout the organization. 2. Caritas Coaches involvement at medical centers inconsistent. 3. Inconsistent senior leadership support for Caring Science education. Due to lack of Caring Science education of CNE's, COO's and Area Managers. 4. Lack of HCAHPS Caring Science custom question data review at local medical centers. 5. Linkage to Caring Science education and changes to the nurses caring behaviors or attributes has not been studied within the organization. 6. Silo work between Caritas Coaches and Care Experience leaders. 	<ol style="list-style-type: none"> 1. Standardized Caring Science education program developed and implementation plan in development. 2. Senior leadership exposure to Caring Science education. 3. Caritas Coaches and Care experience leaders have combined focus to enhance care experience for the organization. 4. Data collection on nurses caring attributes/behaviors guiding ongoing Caring Science work within the organization. 	<ol style="list-style-type: none"> 1. Senior leadership will receive a standardized orientation on Caring Science. 2. Caritas Coaches will own the Caring Science program at their local medical centers. 3. Standardized Caring Science education plan will be delivered at each medical center within the organization quarterly. 4. Data examining nurses caring attributes/behaviors will inform future Caring Science work within the organization. 5. Caritas Coaches, Care Experience leaders will work in conjunction with staff to elevate the care experience within the organization.

Caring Science Education: The essence of professional practice for the registered nurse.



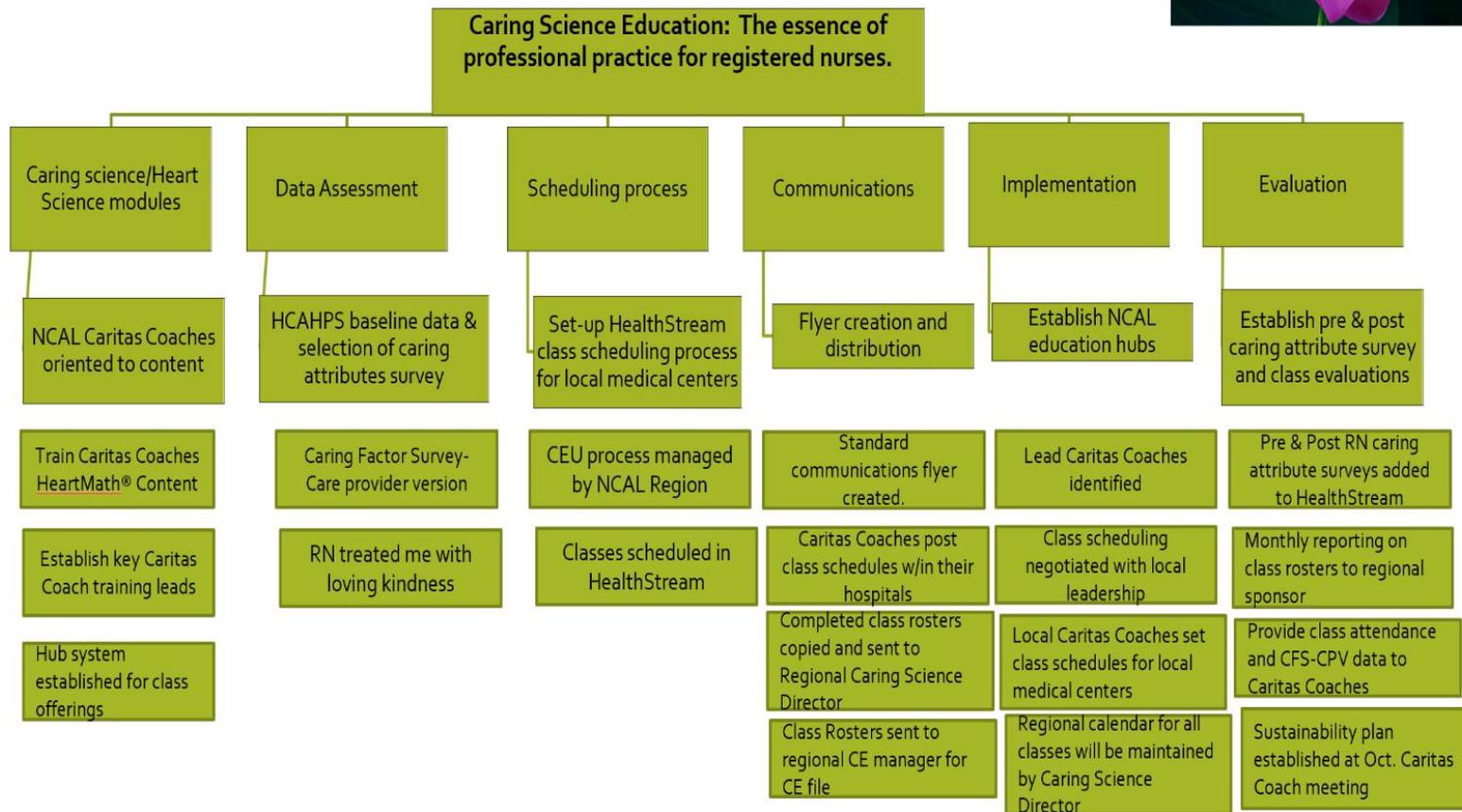
Appendix H. SWOT Analysis

<p style="text-align: center;">STRENGTHS (+)</p> <ul style="list-style-type: none"> • Single nurse theorist and National Professional Practice model for nursing for Kaiser Permanente, • Caritas Coach aligned to each of the 21 medical centers. • Total caritas coaches in NCAL = 57 • Kaiser Permanente NCAL is the largest Watson Caring Science affiliate in the world. • Caring Science/Heart Science education modules endorsed by Dr. Jean Watson. Content co-created with caritas coaches and, Robert Browning, Master Trainer for HeartMath Institute. • Stable RN nursing staff- low RN turn-over rate 	<p style="text-align: center;">WEAKNESSES (-)</p> <ul style="list-style-type: none"> • Caritas coaches are not dedicated roles for the organization. The coaches may have difficulty dedicating time to teach the Caring Science education classes due to operational needs. • High turn over of local CNE's resulting in limited understanding or supporting the Caring Science education series. • Union (CNA) will discourage nursing staff in participating in the Caring Science education. • Organization metrics and rapid results driven. • Staff are task driven based on current culture. • Organization's Northern and Southern California nursing theories are different. • Organization's nursing senior leadership turnover.
<p style="text-align: center;">OPPORTUNITIES (+)</p> <ul style="list-style-type: none"> • Integration of Caring Science education modules with WCSI affiliate hospitals within NCAL. • Caring Science/Heart Science education program adopted by WCSI as a model for organizations teaching Caring Science. • Caring Science/Heart Science education process incorporated into organizations professional educational affiliates educational curriculum plan. 	<p style="text-align: center;">THREATS (-)</p> <ul style="list-style-type: none"> • Healthcare organizations within NCAL competing for recruitment of Caritas nurses. • Loss of affiliation status if Caring Science work not accepted by organization. • Nursing union discouraging staff from participating in education program.

Appendix I. Work Breakdown Structure



Work Breakdown Structure



Appendix J. Responsibility/Communication Matrix

	Objective of Communication	Medium	Frequency	Audience	Deliverable	Responsible Owner
Presentation to organization sponsor and project discussion with facility advisor	Introduce the project. Review project objectives and management approach.	Face-to-face	One time and follow-up meetings as needed	Nurse Scholars Academy (NSA) sponsor	-Agenda -Meeting minutes	Project Manager/NSA Director of Professional Practice
Kickoff meeting with Caritas Coaches	Introduce the project team and the project. Review project objectives and management approach.	Face-to-face	One time	Caritas Coaches NCAL	-Agenda -Meeting minutes	Project Manager
Training Caring Science/Heart Science module content to Caritas Coaches	Education	Face-to-face	One time	Caritas Coaches	-Teaching HeartMath content -Essential elements for consistency -Establish teaching hubs	Project Manager HeartMath Master trainer Caritas Coach content leads
HealthStream scheduling meeting	-Establish class scheduling process. - CEU plan -Course communication plan	Face-to-face	One time and follow-up meeting as needed	Project manager and HealthStream lead	-Caring Science/Heart Science education scheduling process completed. -CEU content submitted -Class scheduling communication plan established	Project Manager and HealthStream lead
Notification to Caritas Coaches to begin scheduling classes	Education	Email	Once with follow-up emails as needed	Frontline acute care nurses and leaders	Caring Science/Heart Science flyers for advertisement	Project Manager and Caritas Coaches
Evaluation of class scheduling and attendance	Information distribution	Email	Monthly	Caritas Coaches and Sponsor	Monthly class schedules and attendance reports	Project Manager

Appendix K. Budget

	PROJECT TASKS	LABOR HOURS	LABOR COST/HR	TRAVEL COST (\$)	OTHER COST (\$)	Total Per Task
PREPARATION ASSESSMENT	Gain Necessary Approvals	5.0	\$98.00	\$0.00	\$0.00	\$490.00
	Caring Science/Heart Science modules	84.0	\$86.00	\$0.00	\$0.00	\$7,224.00
	Orientation of content Caritas Coaches	84.0	\$86.00	\$0.00	\$0.00	\$7,224.00
	Research content & validation tool	30.0	\$98.00	\$0.00	\$0.00	\$2,940.00
	Obtain tool approval	5.0	\$98.00	\$0.00	\$0.00	\$490.00
	Subtotal		208.0		\$0.00	\$0.00
IMPLEMENTATION	Develop educational cohort plan	10.0	\$98.00	\$0.00	\$0.00	\$980.00
	Set-up HealthStreams scheduling system	3.0	\$75.00	\$0.00	\$0.00	\$225.00
	Create class flyers	1.0	\$0.00	\$0.00	\$0.00	\$0.00
	Participant attendance time	2,440.0	\$75.00	\$0.00	\$0.00	\$183,000.00
	Participant back fill	846.0	\$75.00	\$0.00	\$0.00	\$63,450.00
	Caritas Coach time	100.0	\$80.00	\$0.00	\$0.00	\$8,000.00
	Subtotal		3,400.0		\$0.00	\$0.00
EVALUATE PRESENTATION	Collate CFS data	10.0	\$98.00	\$0.00	\$0.00	\$980.00
	HCAHPS and Risk data integration	5.0	\$98.00	\$0.00	\$0.00	\$490.00
	Final Report Submitted to sponsor and USF	20.0	\$98.00	\$0.00	\$0.00	\$1,960.00
	Presentation of Findings	10.0	\$98.00	\$0.00	\$0.00	\$980.00
	Subtotal		45.0		\$0.00	\$0.00
	Subtotals	3653.0	\$80.00	\$0.00	\$0.00	\$278,433.00
	Total (Scheduled)	3653.0	\$80.00	\$0.00	\$0.00	\$278,433.00

Appendix L. Cost Avoidance

Cost Avoidance Calculation

One medical center within a large multi-site organization

<u>Risk Events</u>	2018 (Jan- Dec)	2019 (Jan-June)	Cost/event	Potential Cost Savings
C-diff	14 cases	10 cases	\$11,361	\$45,444
HAPI	0 cases	0 cases	\$17,000	\$0
CAUTI	4 cases	3 cases	\$1,000	\$1,000
CLABSI	2 cases	0 cases	\$17,000	\$34,000
Pt. Falls	60 cases	27 cases	\$7,234	\$238,722
HAP	5 cases	0 cases	\$70,000	\$350,000
C-Sect SSI	11 cases	2 cases	\$3,000	\$27,000
All SSI	24 cases	*14 cases (Jan- May) *June cases pending	\$21,00	\$210,000

Agency for Healthcare Research and Quality (2018)

Total potential cost avoidance for each medical center: \$906,166

Appendix M. Caring Science/Heart Science Modules

 <p>MODULE 1 CARING CONNECTION OUR PROFESSIONAL PRACTICE</p>	<p>Explain how theory-based practice, professional practice standards, and the ANA Nursing Code of Ethics guide your practice</p> <hr/> <p>Identify why the Theory of Human Caring was chosen for Kaiser Permanente Northern California</p> <hr/> <p>Illustrate Caring Science in practice through examination of Caring Moments</p>
 <p>MODULE 2 BEING AND BECOMING TAKING CARE OF SELF AND OTHER</p>	<p>Discover personal self-care modalities to increase your resilience.</p> <hr/> <p>Describe clinical practices that illustrate caring behaviors that honor human dignity.</p> <hr/> <p>Relate how the four practices of gratitude, surrender, forgiveness, and compassionate human services move practitioners beyond ego-self.</p>
 <p>MODULE 3 THE HEALING ENVIRONMENT PROVIDING CARE TO OUR PATIENTS AND MEMBERS</p>	<p>Describe authentic presence and healing communication modalities</p> <hr/> <p>Analyze the connections between care experience nursing strategy and caring science</p> <hr/> <p>Describe the nurse's role in empowering patients and families to engage in genuine teaching-learning experiences that honor their healing journey.</p>
 <p>MODULE 4 CARITAS CONSCIOUSNESS EVOLVING OUR CARE ENVIRONMENTS</p>	<p>Examine how you, as a clinician, demonstrate creative use of self in the caring process</p> <hr/> <p>Discuss the importance of moving from authority to collaboration when engaging in authentic patient/family teaching</p> <hr/> <p>Develop a HeartMap that reflects how you will integrate Caring Science into your professional practice</p>

Appendix N. Survey Tool and Participant Letter**Caring Science Survey Pre-Education**

Dear class participant:

We are interested in learning about your Caring attributes prior to and following the completion of this Caring Science & Heart Science education series. A reputable Caring self-assessment survey has been selected and it will take you 5 to 10 minutes to complete the survey. The purpose of this note is to ask you to participate in an evidence-based quality improvement project that will compare participant's perceptions of their Caring attributes pre and post the courses to potentially identify changes in practice. Some demographic information has also been included to support the evaluation phase of the project.

All your answers will be kept completely confidential. The survey results will have no identifying information on it and no individual identities will be used in any reports or publications that may result from this work. If you agree to voluntarily participate, please complete the surveys below.

Thank you in advance for assisting with and taking the time to participate in this study.

Caring Science Survey Pre-Education

1. At which Kaiser facility do you practice? (Select from the drop-down box below)

2. Current role:

- RN
- PCT
- MSW
- Transporter
- Respiratory Therapist
- Nurse Leader: CNE
- Nurse Leader: Director
- Nurse Leader: Manager
- Nurse Leader: Assistant Nurse Manager
- Other (please specify)

3. Work setting:

- Hospital
- Rehab center
- Clinic
- ED
- Home Health
- Hospice
- Other (please specify)

4. Years in Current Position

- <1 year
- >1 year - <2 years
- >2 years - <4 years
- >4 years - <10 years
- >10 years - <20 years
- >20 years

5. Years in Practice

- <1 year
- >1 year - <2 years
- >2 years - <4 years
- >4 years - <10 years
- >10 years - <20 years
- >20 years

6. Caring Factor Survey - Care Provider Version:

Dr. John Nelson, Dr. Jean Watson, Dr. Karen Drenkard and Gene Rigotti.

Please select the your answer to each of the following questions or statements:

	Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
Overall the care I give is provided with loving kindness.	<input type="radio"/>						
As a team, my colleagues and I are good at creative problem solving to meet the individual needs and requests of our patients.	<input type="radio"/>						
I help support the hope and faith of the patients I care for.	<input type="radio"/>						
I am responsive to my patients' readiness to learn when I teach them something new.	<input type="radio"/>						
I am very respectful of my patients' individual spiritual beliefs and practices.	<input type="radio"/>						
I create an environment for the patients I care for that helps them heal physically and spiritually.	<input type="radio"/>						
I am able to establish a helping-trusting relationship with the patients I care for during their stay here.	<input type="radio"/>						
I respond to each patient as a whole person, helping to take care of all of their needs and concerns.	<input type="radio"/>						
I encourage patients to speak honestly about their feelings, no matter what those feelings are.	<input type="radio"/>						
I am accepting and supportive of patients' beliefs regarding a higher power if they believe it allows for healing.	<input type="radio"/>						

Permission to use the Caring Factor Survey Care-Provider version was granted by Dr. John Nelson.

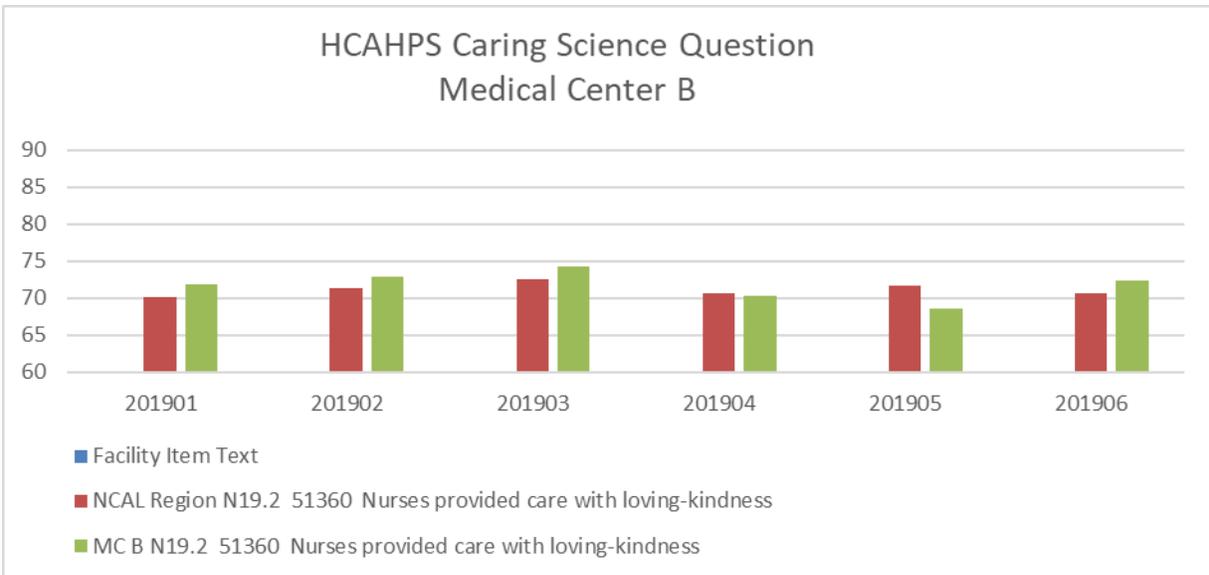
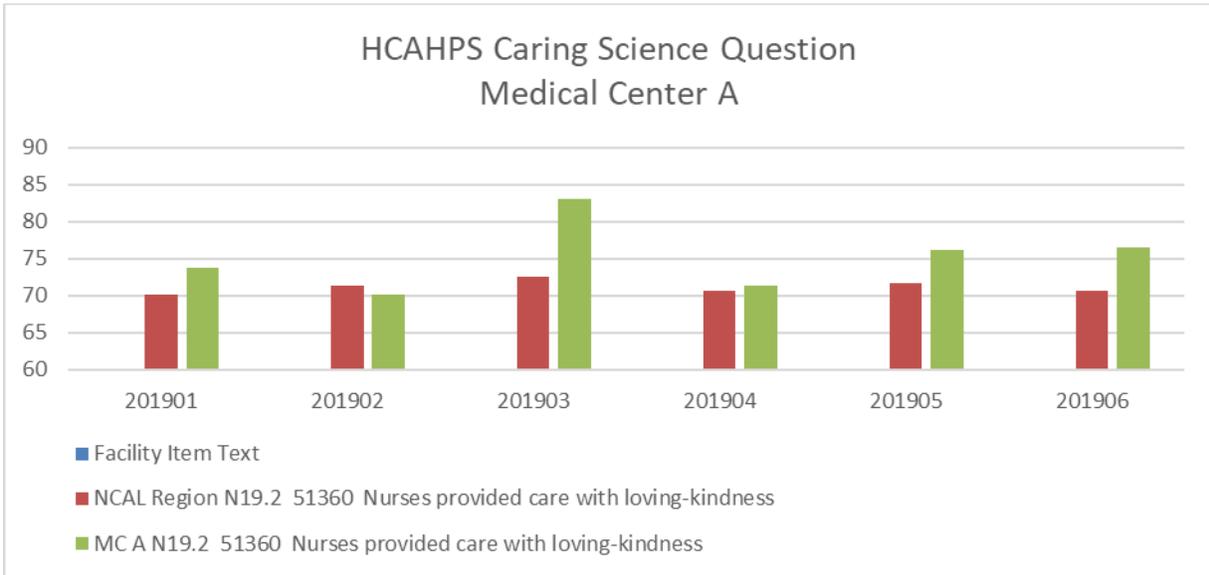
Appendix O. CFS-CPV Results

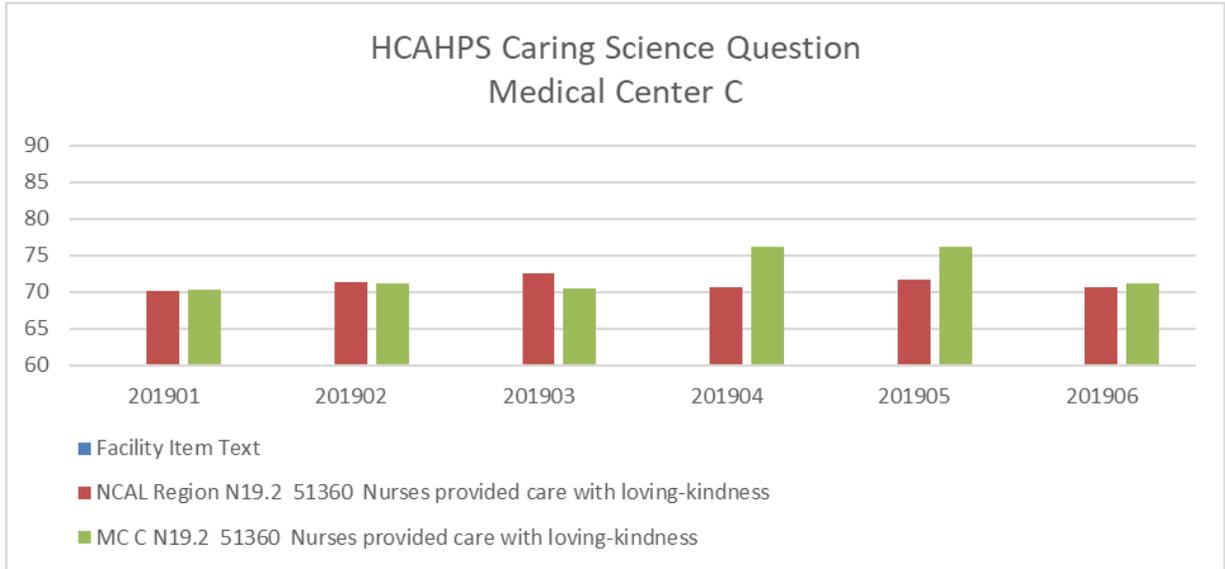
Medical Center A	Weighted Average		
	Pre-Education (N=60)	Post-Education (N=48)	Change
Overall the care I give is provided with loving kindness.	5.82	5.96	↑
As a team, my colleagues and I are good at creative problem solving to meet the individual needs and requests of our patients.	5.47	5.77	↑
I help support the hope and faith of the patients I care for.	5.78	5.96	↑
I am responsive to my patients' readiness to learn when I teach them something new.	5.77	5.96	↑
I am very respectful of my patients' individual spiritual beliefs and practices.	5.8	5.96	↑
I create an environment for the patients I care for that helps them heal physically and spiritually.	5.75	5.96	↑
I am able to establish a helping-trusting relationship with the patients I care for during their stay here.	5.77	5.96	↑
I respond to each patient as a whole person, helping to take care of all of their needs and concerns.	5.78	5.96	↑
I encourage patients to speak honestly about their feelings, no matter what those feelings are.	5.82	5.96	↑
I am accepting and supportive of patients' beliefs regarding a higher power if they believe it allows for healing.	5.82	5.96	↑

Medical Center B	Weighted Average		
	Pre-Education (N=77)	Post-Education (N=17)	Change
Overall the care I give is provided with loving kindness.	5.69	5.94	↑
As a team, my colleagues and I are good at creative problem solving to meet the individual needs and requests of our patients.	5.53	5.71	↑
I help support the hope and faith of the patients I care for.	5.65	6	↑
I am responsive to my patients' readiness to learn when I teach them something new.	5.75	6	↑
I am very respectful of my patients' individual spiritual beliefs and practices.	5.7	6	↑
I create an environment for the patients I care for that helps them heal physically and spiritually.	5.65	5.76	↑
I am able to establish a helping-trusting relationship with the patients I care for during their stay here.	5.7	5.88	↑
I respond to each patient as a whole person, helping to take care of all of their needs and concerns.	5.77	6	↑
I encourage patients to speak honestly about their feelings, no matter what those feelings are.	5.78	5.94	↑
I am accepting and supportive of patients' beliefs regarding a higher power if they believe it allows for healing.	5.75	6	↑

Medical Center C	Weighted Average		
	Pre-Education (N=69)	Post-Education (N=34)	Change
Overall the care I give is provided with loving kindness.	5.91	6	↑
As a team, my colleagues and I are good at creative problem solving to meet the individual needs and requests of our patients.	5.75	5.82	↑
I help support the hope and faith of the patients I care for.	5.77	6	↑
I am responsive to my patients' readiness to learn when I teach them something new.	5.81	6	↑
I am very respectful of my patients' individual spiritual beliefs and practices.	5.88	6	↑
I create an environment for the patients I care for that helps them heal physically and spiritually.	5.87	5.97	↑
I am able to establish a helping-trusting relationship with the patients I care for during their stay here.	5.84	5.94	↑
I respond to each patient as a whole person, helping to take care of all of their needs and concerns.	5.91	6	↑
I encourage patients to speak honestly about their feelings, no matter what those feelings are.	5.93	6	↑
I am accepting and supportive of patients' beliefs regarding a higher power if they believe it allows for healing.	5.9	6	↑

Appendix P. HCAHPS Data





Appendix Q. Statement of Non-Research Determination Form**Student Name:** Linda Ackerman

Title of Project: Caring Science Education: The essence of professional practice for the registered nurse.

Brief Description of Project: Development, implement and evaluate a standardized experiential Caring Science/Heart Science education series in collaboration with the Caritas Coaches w/in Kaiser Permanente NCAL. The standardized module series will be delivered to front line registered nurses by the Caritas Coaches within the 21 medical centers of KP NCAL. The experiential learning series is being developed to transform the hearts and minds of the registered nurses. Pavlish and Hunt (2012) conducted a narrative design interview study at an organization who had just implemented relationship-based care to understand the RNs' perceptions of meaningful work and the contextual factors that impact the RNs' perceptions of meaning at work. The RN's stories revealed that RNs' found purpose and meaning through the relational activities of being and connecting with patients. Asselin & Fain (2013) conducted a mixed method study to determine if a nurse's participation in a reflective practice continuing education program made a difference in the self-reflection, insight and, reflective thinking about their care in specific clinical situations. The outcome of their study indicated that additional studies examining larger scale reflective practices studies need to be conducted. The Caring Science/Heart Science education series and study will examine this work in a large 21 medical center organization focusing on engaging the nursing staff to self-reflect and examine and, explore concepts that to link purpose to practice. Moving them beyond task, to experiencing transpersonal caring relationships with their patients.

A) Aim Statement: Develop, implement and evaluate the standardized Caring Science/Heart Science education program by September 2019.

B) Description of Intervention: Integration and co-creation of "one voice" for nursing clinical practice is a key strategy to transform and empower the professional nurse to own their practice. The caring science/heart science education series incorporates Kaiser Permanente's national nursing professional practice model; Voice of Nursing (VON) and the fundamentals of care experience to align all of the

programs to caring science “connect the dots” of the various initiatives back caring science as a foundation for the staff, providing them an opportunity to enhance and reinforce their perception of meaningful work. This project will allow the organization to assess the value of the caring science education program in relationship the RN’s personal perception of the impact of the education on their caring attributes in conjunction with patient’s perceptions of being cared for with loving kindness. Using the following tools assessing the caring behaviors and attributes of the RN: Modified Wolf (2014) and Caring Factor Survey (Nelson, J., Watson, J., 2012). The voluntary survey’s will be done pre-& post education intervention to assess for shifts in self-reported caring behaviors of the RN at the completion of Caring Science/Heart Science education series. Demographic variables, age, sex, years as registered nurse, and years in current role have been added to electronic survey. The demographic data will be assessed and evaluated against the caring attribute survey data.

C) How will this intervention change practice? The intent is to reconnect the nursing staff to the art and science of the nursing profession and move beyond task-focused care to engaging patients, families and co-workers in creating authentic, caring healing practices and environments.

D) Outcome measurements:

- RN knowledge attainment will be measured and reported as aggregated data by medical center, reflecting the level of change in the RN’s self-reported caring attributes from the pre and post survey results.
- Course evaluation questions will be developed to evaluate transfer of knowledge to practice relating to HeartMath practices for self-care, centering and authentic presence.
- HCAHPS data will be aggregated by medical center. The projected impact on the patient’s perception of being cared for, HCAHPS “Nurses provided me care with loving kindness” is targeted to an increase of 5% Northern California region wide pre to post implementation of the experiential education series over 6 months. This custom question was developed by the organization upon integration of Caring Science as the foundation for professional nursing practice.

References:

- Asselin, M, & Fain, J. (2103). Effect of reflective practice education on self-reflection, insight, and reflective thinking among experienced nurses. *Journal for Professional Development*, 29(3), 111-119.
- Johnson, J. (2012). Creation of the caring factor survey-care provider version. In J. W. Nelson & J.

Watson (Eds.), *Measuring caring: International research on Caritas as healing* (pp.40-42) New York, NY: Springer.

Persky, G. J., Nelson, J. W., Watson, J., & Bent, K. (2008). Creating a Profile of a Nurse Effective in Caring. *Nursing Administration Quarterly*, 32(1), 15-20.

Johnson, J. (2012). Creation of the caring factor survey-care provider version. In J. W. Nelson & J. Watson (Eds.), *Measuring caring: International research on Caritas as healing* (pp.40-42) New York, NY: Springer.

To qualify as an Evidence-based Change in Practice Project, rather than a Research Project, the criteria outlined in federal guidelines will be used: (<http://answers.hhs.gov/ohrp/categories/1569>)

This project meets the guidelines for an Evidence-based Change in Practice Project as outlined in the Project Checklist (attached). Student may proceed with implementation.