Cultivating a Culture of Compassion Among Newly Graduated Registered Nurses: An Evidence-Based Mobile Learning Toolkit

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Cultivating a Culture of Compassion Among Newly Graduated Registered Nurses

The Use of An Evidence-Based Mobile Learning Toolkit

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July 2017
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Abstract

Empathy, kindness, and compassion are some of the humanistic values essential to nursing practice particularly in today’s patient and family-centric healthcare environment. A genuinely empathetic and caring relationship between a nurse and a patient not only enhances the quality and safety of care but also contributes to patient satisfaction, compliance to treatment, and overall health outcomes. Debate amongst educators and researchers continues to grow as to whether these uniquely humanistic values are innate or if they can be taught. How do nurses acquire the knowledge, skills, and attitudes towards the delivery of compassionate patient care? What strategies are best suited to cultivate and sustain a competent and compassionate nursing workforce? This evidence-based quality improvement project is built on existing findings from Simulation-Based Education (SBE), as an effective pedagogy, to enhance professional nursing practice. A smartphone mobile education application (app) was developed, implemented, and evaluated for a cohort of newly graduated registered nurses to improve their transition to practice experiences in a nurse residency program at a large integrated healthcare system in Southern California. By incorporating the science of caring, experiential learning, mindfulness practice, self-reflection, and peer-to-peer feedback, through the use of a state-of-the-art mobile app, into an existing simulation-based nurse residency program, participants reported an increase in clinical competency, communication skills, reflective practice, and self-compassion.

Keywords: Caring, empathy, compassion, mobile learning, transition to practice, nurse residency program, simulation, experiential learning, self-reflection, mindfulness
Section II. Introduction

Overview

The construct, efficacy, and validity of clinical simulation in nursing education has grown exponentially in recent years. Simulation-Based Education (SBE) provides faculty the ability to deliver constructive and timely feedback to students in a safe and supportive learning environment. SBE offers students additional opportunities to gain valuable insights and needed confidence in patient care prior to entering the nursing workforce. Despite ongoing efforts, a transition from the educational to practice setting gap continues to exist for newly graduated nurses. Nurse educators and researchers are seeking innovative approaches to strengthen new graduate nurses’ clinical competency, self-confidence, decision-making, and caring behaviors. With the advancement of telecommunication, wireless technologies, and mobile devices, a myriad of digitally enhanced teaching modalities and virtual (remote) content delivery platforms have been conceptualized. Game-based learning, virtual simulation, augmented reality, and mobile applications (apps) are some of the innovations in educational design aimed to enhance learners’ knowledge, skills, and attitudes. Parallel to the expansion of these innovations are the increasing emphasis on patient and family centered care where empathy, kindness, and compassion are some of the humanistic qualities paramount to high quality nursing care. The purpose of this evidence-based, change of practice, quality improvement project was to develop, implement, and evaluate the use of a state-of-the-art smartphone app to enhance caring practice for newly graduated nurses in a large integrated healthcare system in Southern California. The overarching goal of the project is to identify practical strategies and resources to cultivate and sustain a competent and compassionate nursing workforce.
Background

Nursing Transition to Practice Gap

Historically, nursing education and training depended heavily on an apprenticeship model when diploma-nursing programs were offered solely by hospitals to meet the needs of the community. Clinical faculty were often chosen primarily for their experience and excellent clinical skills in the hospital setting where student nurses received very limited formal classroom training and spent most of their time working alongside faculty at the bedside. As students progressed through their “training”, they began to take on more responsibilities and eventually graduated and became “full time nurses”. Generally, these new nurses were fully equipped and practiced for an extended period of time under the direct supervision of the head nurse. As expected, very little or no concerns were raised in meeting the demands of the workplace or adjusting to the culture of nursing in the practice environment (Sullivan, 2010).

During the turn of the century, along with a rapidly growing body of knowledge in medicine and Florence Nightingale’s vision of nursing as a true profession, formal training of nurses began to migrate from the hospital setting into colleges and universities in the early 1920’s (Sullivan, 2010). By 1923, the historical Goldmark Report was published and recommended that, for the first time in the history of nursing, professional nursing education and training should reside within higher educational institutions. All nurses should be adequately and professionally trained to care for patients. Over the next forty years after the report was first published, many of the diploma programs in the United States transitioned into colleges and universities (Goode et al., 2009).

The relocation of nursing education and training from hospital settings to higher education institutions generated many important milestones for the profession of nursing. With
the addition of science, sociology, psychology, and other liberal art subjects taught by experts in their perspective fields, this transition offered nursing students a solid foundation of professional development and assisted in establishing nursing as a knowledgeable, respectful, and well-rounded profession. Nursing faculty were encouraged to further their practice and obtain advanced training and credentialing by continuing education classes, specialty certifications, and the development of discipline specific theories and practices. Nurses for the first time in the history of the profession were offered the opportunity to generate and apply new knowledge to elevate nursing practice into a true profession (Smith et al., 2007). A commitment to lifelong learning was intellectualized and quickly adopted by practicing professional nurses. Student nurses who now graduate from an accredited nursing program are now qualified to take the state nursing licensure examination and become Registered Nurses.

The unforeseen consequences of the transition from hospital-based training to university-led education over the last few decades formed the core of the education to service gap or later referred to as the “transition to practice gap”. The reduction in time nursing students spent at the hospital with patients along with rigorous demands to fulfill general education requirement towards graduation at the university put constraints on the overall quality and quantity of patient care, disease management, and clinical competency. Nursing faculty were no longer required to work concurrently in the clinical setting and costs prohibited them to be employed at other hospitals. In addition to the vigorous teaching assignments and academic responsibilities they supported, faculty spent less quality time with students at the bedside (Sullivan, 2010). These changes, once a requirement, created a void in maintaining current knowledge and clinical expertise amongst faculty. In addition, advanced technology, medicine, surgical interventions, and disease management principles further impacted faculty’s ability to maintain their expert
status away from the hospital setting. Clinical supervision and guidance for students became limited and sporadic. Faculty and students were treated as visitors rather than staff members of the hospital. Over time, the practice of allowing nursing students to be on the unit were reduced from full time to one to two days per week and the ability to rotate to different clinical areas or to assist with difficult patients’ cases were also reduced.

Consequently, these changes limited students’ opportunities to obtain a realistic sense of the nursing workflow, to experience dynamic interactions with members of the healthcare team, and to develop genuine caring nurse-patient relationships. Moreover, educational programs and nursing curricula were geared towards preparing students for the licensure exam or teaching task completion rather than guiding them to focus on patient conditions and listening to their concerns.

The term “reality shock”, described the costs of some of these unforeseen changes affecting newly graduated nurses, was first introduced by Kramer in the early 1970’s. According to Goode et. al. (2009), two major factors may have contributed to the ongoing transition to practice gap amongst newly graduated nurses. A lack of nursing faculty engagement in current clinical practice, reduced faculty involvement and reduced time spent in the clinical area by nursing students may have contributed to the ongoing challenges for the profession. As a result, several strategies have emerged to help bridge the education and practice gap. For example, nursing capstone transition to professional practice clinical course/program attended by senior nursing students prior to graduation, post-licensure transition to practice or nurse residency program offered by hospitals, pre-employment internship program, university-based transition to practice certification program, or industry-based remediation plans are available for newly graduated nurses to partake.
Simulation-Based Education

Innovations to improve education and professional development in healthcare is not new. High fidelity simulation in medical and nursing education and training is quickly becoming a reality for today’s health science educator (Cook et al., 2011). Simulation-based education (SBE) has become the gold standard of healthcare education through the use of patient simulators with realistic user interfaces coupled with effective pedagogic debriefings. Improved internet connection speed, lowered costs of computer processors, innovative portable devices, and the wide spread adoption of Web 2.0, simulation-based education and training offers many unprecedented opportunities for learners at all level to enhance their critical thinking, clinical decision-making, and leadership skills (Berragan, 2011).

Advancements in telecommunication and mobile technologies in recent years has given rise to new forms of learning platforms other than the traditional face-to-face format. Game-based learning, mobile applications (apps), virtual reality, and augmented reality are positioned to play a major part in our future healthcare education and training (Bauman, 2016). According to a research firm Ambient Insight, mobile learning in the form of mobile education apps are set to reach $8.9 billion U.S. dollars in 2017, up from $1.5 billion U.S. dollars in 2012. The advancement of smartphones, wearable devices, and increasing interests among the millennium generation using social media and game-based learning will continue to fuel the rapid development, deployment, and adoption of mobile learning technology. From virtual reality simulations helping employees to do their jobs better to completing annual competencies, educational apps are becoming more and more creative and dynamic.

Aside from smartphones, such as the Apple iphone or the Samsung Galaxy S, or tablets, such as Apple’s iPad or Samsung’s Tab, lightweight touch screen laptops, such as the Chrome
book or Window Surface Pro, are gaining attention in the mobile learning space. The enhanced functionalities by many smartphones, tablets, or laptops to be able to project or “screen-cast” onto a television or projector screen provides additional incentives for mobile app developers to create unprecedented content for learners to be more engaged in learning. And for the first time, smart devices like smartwatches, fitness trackers, virtual reality headsets, augmented reality devices, and even our home appliances are heralding into a new era of mobile connectivity also known as “Internet-of-Things”.

The use of handheld smart devices and smartphones in nursing curricula began about twenty years ago with the introduction of the Personal Digital Assistance (PDA). These portable devices rapidly became an integral part of nursing practice. For example, nursing students found that using mobile technologies enhanced knowledge acquisition and supported peer-to-peer connection and learning. Nurses working in acute care hospitals, home care settings, long term care facilitates, or primary care settings reported an improvement in their clinical skills and an increased awareness of up to date evidence-based practice (Sedgwick, Awosoga, Grigg, & Durnin, 2016). Furthermore, nurses reported that retrieving timely and current information using their mobile devices helped them with their decision-making, clinical practice, and enhanced patient care. One study even suggested that nurses who used mobile devices spent less time documenting and more time with their patients (Hong et. al., 2009).

As the use of these and other digital domains mature and become more widespread, learners will most likely demand that these digital domains be incorporated into their educational curriculum. One of the goals of any form of educational innovation is to create a meaningful and noteworthy learning experience for both the facilitator and the learner. The use of innovative strategies (e.g. game-based learning, mobile app, virtual reality) in nursing education and
professional development coupled with experiential learning designs (e.g. role-play, simulation, virtual video storytelling) may support a more effective transition to practice experience and potentially help sustain behavioral changes in the clinical setting. Furthermore, utilizing some of these innovative ideas may also heighten nurses’ emotions and senses, elevate their clinical judgement skills, and enhance their empathetic behaviors and approaches with delivery of competent and compassionate care (Chaffin & Adams, 2013). This leveraging of innovative learning and teaching modalities are essential to prepare future nurses to adapt to the new healthcare environment.

**Compassion**

The concept of compassion has its root in ancient philosophies, religions, and spiritual practices. According to Aristotle (384BC – 322BC), compassion is one of the five important virtues a person need to develop in order to flourish and to be happy in life. Confucius (551BC – 479BC) identified “Compassion, Wisdom, and Courage as the three universally recognized moral qualities of men”. He further described, “Not feeling compassion for a stranger is like not feeling when one’s foot has caught on fire”. In Buddhism, compassion is defined as “understanding or being aware of another person’s suffering and acting to end this suffering”. Lastly, the Dalai Lama defines compassion as “an openness to the suffering of others with a commitment to relieve it”.

From the standpoint of evolution, compassion can be traced back to Darwin, who stated that “those communities which included the greatest number of the most sympathetic members would flourish best, and rear the greatest number of offspring”. The practice of compassion has since evolved from nurturing and protecting one’s offspring to caring for others beyond one’s immediate kinship group. In healthcare, compassion has been seen as an integral part of caring
and treating patients. The American Medical Association Code of Ethics cites that, “A physician shall be dedicated to providing competent medical care, with compassion and respect for human dignity and rights”. In the United Kingdom, compassion is one of the six core principles in the National Health Service constitution. Florence Nightingale viewed compassion as “a moral virtue and an essential trait that should be possessed by all good nurses” (Bradshaw, 2011). Similarly, studies have found compassion can enhance the quality and safety of care, compliance to treatment plans, and contributes to patient satisfaction and overall health outcomes. Conversely, a lack of compassion or burn out may contribute to the poor wellbeing of both the clinician and the patient.

Despite the significance of compassion in both our personal and professional lives, there is still a lack of consensus on its definition, practice guidelines, and psychometric measurement tools. In recent years, clinicians, researchers, and governmental agencies have placed an urgent priority in identifying psychometrically sound evaluations and measurement tools to thoroughly examine and assess compassion and compassionate care. Healthcare educators and researchers are looking for evidence-based strategies to help nurture and further enhance the development of compassion amongst individuals and systems.

**Local Problem**

**Future Nursing Workforce**

More than 70% of registered nurses in the United States are between 50 to 64 years of age, with many of them planning to retire in the next five to ten years (Bureau of Labor Statistics, 2016). The need for nurses is projected to increase over the next decade. According to the United States Department of Labor, employment of nurses will increase by 16% by 2024, with a projected need of over 430,000 nurses nationwide (Bureau of Labor Statistics, 2015).
Registered nurses with less than one year of clinical experience composed of about 10% of the workforce and are expected to grow rapidly. Meanwhile, turnover rates for acute care nurses are at 15% and newly graduated nurses’ turnover rates as high as 50% reported in some studies (Spiva et al., 2013).

To reduce the high turnover of newly graduated nurses, the Institute of Medicine (IOM) recommended the implementation of nurse residency programs to strengthen the transition to practice experience. In a comprehensive literature review conducted by Cochran (2017), nurse residency programs are a cost-effective method to reduce attrition rates of new nurses by providing additional education, experience, and support during their first year of practice. According to the HealthImpact group, formerly the “California Institute For Nursing and Health Care - CINHC”, they reported that nurse residency program curricula and content delivery methods in the State of California vary widely from institution to institution (Orlowski, 2011). A consensus cannot be found in literature identifying best practices because most of the reporting was only given anecdotally in the community. Meanwhile, the need for evidence-based nurse residency programs to safeguard the success of newly graduated nurses continues to grow.

**Intended Improvement**

**AIM Statement**

This evidence-based, change of practice, quality improvement (QI) project is aimed to improving the existing Kaiser Permanente Southern California Regional Nurse Residency Program by incorporating an evidence-based mobile learning app and toolkit. This QI project will integrate experiential learning (digital video narrative), peer-to-peer support (feedbacks via the mobile app), reflective learning (self-reflection journal), and mindfulness practice (meditation exercise) to enhance caring behavior (compassionate care) and clinical competency.
(therapeutic communication) of newly graduated nurses by using a state-of-the-art smartphone app. The smartphone app along with the new graduate nurse’s toolkit will be piloted as part of a Regional Nurse Residency Program in February 2017. The scope of the project is to bridge the transition practice gap and to provide newly graduated nurses a deeper understanding of the science of caring and compassion by using the mobile learning platform and social media technology. The overarching goal is to foster a culture of competent and compassionate nurses in the workforce.

**Purpose of Change**

**Impetus for Change**

Incentives for change include: bridging the transition from an educational to a service setting practice gap amongst newly graduated nurses, enhancing overall clinical competency of novice nurses, reducing turnover and burnout amongst frontline nurses, demonstrating a return on investment (ROI) for the organization, and cultivating a culture of competent and compassionate nurses in the workforce.

**Review of the Evidence**

The transition from an academic setting to a hospital practice environment for newly graduated nurses can be stressful. In today’s fast paced and complex clinical environment, novice nurses are challenged by their limited clinical experience, decision making/prioritization skills, and interpersonal communication skills. Developing safe and competent nurses and ensuring a successful orientation program has become a major challenge for many hospitals largely due to the escalating time and cost for recruitment, orientation, and retention (Zigmont, Wade, Edwards, Hayes, Mitchell, & Oocumma, 2015). Evidence suggests that the use of experiential learning in orientation coupled with supportive clinical preceptorship for 6 to 12
months will highly increase the successful transition into practice for newly graduated nurses (Rhodes, Grimm, Bradas, McClendon, & Noeller, 2016).

The use of Simulation-Based Education (SBE) in educating nurses and other healthcare professionals has become a widely-accepted evidence-based teaching and learning methodology. (Hayden, Smiley, Alexander, Kardong-Edgren, & Jeffries, 2014) Traditionally, undergraduate-nursing curricula has focused mainly on skills acquisition and content mastery. Students learn technical and cognitive skills through a variety of activities like case scenarios, skills practices, classroom lectures, and clinical instruction (Berragan, 2011). However, the use of mixed fidelity simulators as well as standardized patients is becoming more common today across many academic institutions to prepare students to develop critical thinking and decision-making skills (Shin, Park, & Kim, 2015). School-based simulation used in undergraduate nursing education provides students opportunities to enhance their technical, cognitive, and behavioral skills in a safe and nurturing environment while under the guidance and support of trained faculty (Bauchat, Seropian, & Jeffries, 2016). Through structural debriefing and reflective thinking, students gain valuable insights and perspectives in managing high-risk/low-volume events without harming their patients (Liaw, Palham, Chan, Wong, & Lim, 2012).

Hospital-based simulation is geared towards enhancing professional practice, team building, collaboration, communication, personal growth, and lifelong learning. The goal is to improve the clinician’s care delivery practice, to ensure quality and safety, and to promote interprofessional teamwork and collaboration (Cook, Hatala, Brydges, Zendejas, Szostek, Wang, Erwin, & Hamstra, 2011). Hospital administrators and educators turn to simulation seeking to enhance the efficacy and efficiency of patient-centered care with an ongoing effort to improve

A number of studies were conducted examining the effectiveness of hospital-based simulation used in nurse residency programs (Beyea, Slattery, & von Reyn, 2010; Rhodes, Grimm, Dawn, Bradas, McClendon, Noeller, & McNett, 2016). Many of the studies identified the immediate benefits and satisfaction of hospital-based simulation from their learners but only a few have rigorously reviewed long term outcome evaluations and measurements (Rhodes, Grimm, Bradas, McClendon, & Noeller, 2016). Much of the focus of hospital-based simulation has been on assessing and measuring clinical skills and hands on capabilities of the nurse (Clark & Springer, 2012). It is understandable to assess technical competency to ensure safe practice amongst novice nurses, but it is equally important to ensure that empathetic and compassionate care is also being practiced in a patient-centric care environment.

A major contributor of the lack of empathy and compassion amongst newly graduated nurses can be attributed to the insufficient time spent acquiring, practicing, and role modeling patient-centered communication skills in the clinical setting throughout the nursing program (Williams & Stickley, 2010). Opportunities exist through the use of hospital-based simulation to incorporate evidenced-based experiential learning modalities to facilitate the continuous professional development of empathy and compassion through effective interprofessional communication simulations. A systematic review conducted by Batt-Rawden, Chisolm, Anton and Flickinger (2013) of 18 education interventions to teach empathy to medical students concluded that experiential learning or the use of “drama” in simulation could be effective in learning and experiencing empathy. They reported that the level of empathy seems to decline during medical education and residency.
Hospital-based simulation techniques that enable clinicians to improve teamwork and empathetic and caring behaviors includes standardized patients, role-playing, and games. Bearman, Palermo, Allen, and Williams (2015) identified that role-playing or “assuming the role of the patient” in a simulation setting enhanced the learner’s empathetic understanding and sharing of feelings from the patient’s perspective. This requires the learner to “stand in the patient’s shoes” during simulation and to experience the emotions first hand. However, the learner must utilize debriefing and feedback to translate this experience into actual empathetic behaviors and practices. This type of role-playing simulation is often seen as less appealing but a significantly cheaper alternative than trained standardized patients. It could serve as an innovative alternative for learning empathy and caring behaviors.

Lastly, learners avoid acting empathetic solely for performance during simulation with standardized patients and tend to be more genuine with each other during the experience. No studies have been found to date investigating the competency of compassion and strategies to enhance caring with measureable outcomes amongst newly graduated nurses using simulation or other experiential learning modalities.

Project Overview

An evidence-based smartphone app and toolkit were conceptualized in August 2016 (see Appendix C). The mobile app was beta-tested by two qualified nurse education consultants in December 2016. The toolkit was validated by two independent content experts in January 2017. The smartphone app and toolkit were then piloted as a QI project for a nurse residency program in February 2017.

The prospect of the project is to provide novice nurses a deeper understanding of the science of caring and compassion in professional practice. The goal is to foster a culture of
compassion, kindness, and caring amongst newly graduated nurses through experiential learning and self-reflection. The determination of this project is to infuse new elements into an existing nurse residency program, to bridge the transition to practice gap, and to enhance clinical competency and compassionate caring behaviors amongst newly graduated nurses.

Identified gaps in practice were addressed through the Regional Patient Care Services professional development and education consultants in two separate meetings, one in June 2016 and a second one in October 2016. Three Regional professional development and education consultants attended both meetings and approval of the pilot plan was obtained from the Regional Director of Education in November 2016.

An evidence-based question for the project was formulated using the population, intervention, comparison, outcome, and time (PICOT) methodology (Fineout-Overholt, Melynk, Stillwell, & Williamson, 2010). The PICOT search question was:

Does the addition of an evidence-based smartphone app (I) in a nurse residency program compared to traditional face-to-face only program (C) improve clinical competency and compassion (O) amongst newly graduated registered nurses (P) during their first year of clinical practice (T)?

**Literature Search**

A systematic search was conducted for both quantitative and qualitative studies published in English between 2002 and January 2017 using Cochrane, Cumulative Index to Nursing and Allied Health Literature (CINAHL), and PubMed databases. Articles were limited to the English language published after 2002. Key search terms used were: *caring, empathy, compassion, mobile learning, transition to practice, nurse residency program, simulation, experiential*
learning, self-reflection, and mindfulness. Searches also included peer-reviewed journals, Google, Google Scholar, professional organization websites and resources. Exclusions included all non-English articles and articles outside the scope of this project. Three separate searches were conducted (December 2015; June 2016; April 2017) to ensure adequacy. A literature review was planned and conducted consistent with the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) standards of quality for reporting. The level of evidence was assessed according to the Johns Hopkins Research Evidence Appraisal Tool and an evidence appraisal table was created (see Appendix D).

Review of Literature

Transition to Practice Gap

Newly graduated nurses have reported many challenges in transitioning from being a nursing student to a professional registered nurse (Casey & Goode, 2008). Some of their concerns included workplace stress (Casey et. al., 2004), a lack of confidence, fears of harming the patient, prioritizing skills (Fink et. al., 2008), difficulties in communicating with the healthcare team (Owens et. al., 2001), and poor task delegation and conflict resolutions (Keller et. al., 2006).

Studies show that new nursing graduates required a minimum of 12 months of practice to feel comfortable as professional nurses (Goode & Williams, 2004). A survey conducted by Kovner et. al. (2009) on a random sample of new Registered Nurses from thirty-five states and the District of Columbia found that newly graduated nurses have the same patient assignment as the more experienced nurses while they are still trying to master skills and make clinical decisions.
Clark & Springer (2011) conducted a descriptive qualitative study on thirty-seven newly employed new graduate nurses in a hospital in the northwest state and found their limited clinical experience, clinical judgement, organizational and prioritizing skills, and critical thinking to be the determining factors of their transition to practice during the first year of their nursing practice. Having supportive preceptors and understanding nursing staff, feeling valued by the team, and being perceived as a vital member of the organization contributed to job satisfaction and overall commitment to the profession.

Marshburn, Engelke, & Swanson (2009) reported a descriptive correlational study with 265 new nurses using the Casey-Fink Graduate Nurse Experience Survey on the relationship between new nurses’ performance and their perceptions of clinical competence. Only 47% of the new nurses were comfortable with their knowledge of care, 53% felt comfortable making suggestions for changes to the nursing plan of care and 57% felt overwhelmed by their patient care responsibilities.

**Nurse Residency Program**

Kowalski & Cross (2010) studied the clinical competencies, anxieties, stresses, and professional transition and retention of 55 newly graduated nurses who completed a year-long nurse residency program at two hospitals in Las Vegas. The findings of their study indicated an improvement in overall competency, a decreased sense of threat, and improved communication and leadership skills. Their employment retention rate increased from 78% to 96% in one year suggested the value of the nurse residency program.

Goode and her colleagues revealed the outcomes from a 10-years study (2002 – 2012) on a post-graduate nurse residency program co-designed by the University HealthSystem Consortium (UNC) and the American Association of Colleges of Nursing (AACN) in 2013.
(Goode et. al., 2013). Data from the Casey-Fink Graduate Nurse Experience Scale, outcomes from the graduate nurse program evaluation, and the reported increase in retention rate indicated the efficacy and efficiency of a nurse residency program. Participants (n = 1,016) reported a significant increased on their ability to organize and prioritize their work, to communicate, and to provide clinical leadership over the one year program.

Kramer, Maguire et. al. (2011) conducted two qualitative studies suggesting the importance of professional socialization during the transition to practice period on a sample of 907 new nurses in 34 hospitals across the United States. They described stages through which new nurses gained knowledge, developed values, and acquired new skills in professional practice. These stages were identified as knowing, becoming, affirming and integrating as new nurses developed into their professional roles.

**Cost-Benefit of Nurse Residency Program**

Evidence have shown a positive cost-benefit ratio/relationship on implementing a nurse residency program and an increase in retention and a decrease in turnover rates. Reports have shown an average cost of a nurse residency program ranges as low as $2,000 U.S. dollars to as high as $12,125 U.S. dollars per new graduate (Adam et. al., 2009; Fox, 2010; Pine and Tart, 2007). Rush et. al. (2013) cited a number of studies indicating a return on investment and annual savings for hospitals ranging between $186,102 U.S. dollars to $1,040,153 U.S. dollars (based on the assumption that it cost 1.5 to 2 times a nurse’s salary for an organization to recruit and orient a new nurse).

In response to a high turnover rate (over 50%) of new graduate nurses, Methodist hospital in Houston Texas and the University of Texas, Houston implemented a nurse residency program in 2005 (Pine & Tart, 2007). The turnover rate was reduced from 50% to 13% and with an
annual savings of $823,680 U.S. dollars for the hospital after implementation of the program.
Their return on investment (ROI) was calculated using the net program benefits of $823,680 U.S.
dollars and total program cost of $93,100 U.S. dollars. The net program benefits divided by the
total program cost yielded an 8.9 ROI or 890%.

In 2014, Zigmont et. al. conducted a study utilizing experiential learning and the learning
outcome model in a large academic medical center to reduce new graduate nurses’ orientation
time by 35%. One hundred and fifty-three nurses participated in the revised orientation program.
New graduate nurses had a 3.6 week (34%) reduction in orientation time with an estimated
savings of $702,270 U.S. dollars. By integrating experiential learning using a simulation-based
nurse residency program, the authors of this project were able to demonstrate a significant cost
savings and a reduction in turnover rates for the organization. In addition, the results of this
project helped increase buy-in and obtained resources from hospital administration and
leadership.

**Simulation Based Nurse Residency Program**

Studies of simulation-based transition to practice programs in nurse residency programs
are scarce (Cooper et al., 2015; Shin, Park, & Kim, 2015). The cost of orientation and
transitioning newly graduated registered nurses to clinical practice continues to rise (Beyea,
Slattery, & Reyn, 2010; Cant & Cooper, 2014). Only a hand-full of measurement tools have been
developed to ensure the outcomes and successes of these transition to practice programs to date
(Liaw et al., 2012; Yuan et al., 2012).

Liaw et al. (2014) studied the use of simulation learning through academic-practice
partnership to promote transition to clinical practice and identified the following three qualitative
themes: “experiencing the role of staff nurse”, “knowing how to”, and “learning from the
seniors”. This descriptive qualitative study was conducted with twenty-two senior nursing students during their capstone clinical rotation prior to graduation. Focus group interviews were used to identify specific themes and audio-recorded transcripts were analyzed using inductive content analysis. Liaw and colleagues (2014) suggested that a traditional simulation-based single patient scenario may enhance newly graduated nurses’ technical skills, but a more rigorous and dynamic multi-patient scenario may broaden their view and improve their experiences of transition to practice in today’s complex healthcare work environment.

Zhang et al. (2011) reported a systematic review of simulation-based interprofessional education (IPE) and found that a wide range of educational interventions were used to measure simulation-based IPE but without proper psychometric testing. Zhang and her colleagues found that simulation-based IPE education was effective in enhancing learners’ psychomotor skills but specific outcome evaluations on leadership skills were unclear.

Liaw et al. (2012) compared knowledge and self-reported confidence with observed clinical performance. In this study, thirty-one senior nursing students were randomized into control and intervention groups. A six hour simulation-based program was conducted with pre and post-test scores collected on learners’ knowledge, clinical performance, and self-reported confidence level. Liaw and colleagues reported no significant correlation between self-confidence and clinical performance (t = 0.01, p = 0.99), and between knowledge and clinical performance (t = 0.86, p = 0.40) among this cohort.

Kalisch et al. (2015) conducted a study to examine the relationship between simulation and teamwork amongst nursing staff. The findings of this quasi-experimental study indicated a significant ($p < 0.012$) change in overall teamwork (subscales - trust, team orientation, and backup) amongst the participants. Kalisch and his colleagues reported that overall teamwork
behaviors improved post intervention ($t = -3.07$, $p < 0.012$); however, knowledge of teamwork did not improve after simulation ($t = -1.08$, $p < 0.301$). This study illustrated the effective use of a virtual simulation education platform, where participants can remotely access and practice non-technical skills like teamwork in a safe, supportive, and encouraging environment.

**Mobile Learning Platform**

In the study conducted by Cooper and colleagues (2015), nursing students ($n = 97$) completing the last year of their undergraduate pre-licensure program were recruited to complete three face-to-face scenario based simulations and three web-based digital e-simulation scenarios. A pre-test and post-test design along with a structured clinical checklist was used to collect participants’ level of knowledge, skill, confidence, and competence, before and after each simulation session. Cooper and his colleagues concluded that both face-to-face and e-simulation approaches were effective educational strategies with e-simulation offering greater feasibility and added value to their learning experiences.

Nurses working in acute care hospitals, home care settings, long-term care facilities, and primary care areas reported an improvement in their skills and awareness of research evidence when they accessed clinical information resources via mobile devices (Doran, Hsynes, Kushniruk et al., 2010). They indicated that accessing information using a mobile device assisted them in clinical practice and improved their efficiency and effectiveness of patient care (Qadri, Wang, & Roos, 2009).

Sedgwick, Awosoga, Grigg, and Durnin (2016) conducted a descriptive study on senior nursing students to explore how a smartphone app influenced their perception of critical thinking and clinical decision making ability while providing bedside care. Their findings suggested a
statistical difference \((p < 0.001)\) on the participants’ perception in their ability to engage in evidence-based practice over time.

**Compassion Among Newly Graduated Nurses**

A major contributor of the lack of empathy and compassion amongst newly graduated nurses can be attributed to the insufficient time spent acquiring, practicing, and role modeling patient-centered communication skills in clinical settings throughout their nursing program (Williams & Stickley, 2010). Opportunities exist through the use of hospital-based simulation to incorporate evidenced-based experiential learning modalities to facilitate the continuous professional development of empathy and compassion via effective interprofessional communication simulations.

A systematic review conducted by Batt-Rawden, Chisolm, Anton and Flickinger (2013) of eighteen education interventions to teach empathy to medical students concluded that experiential learning or the use of “drama” in simulation can be effective in learning and experiencing empathy. They reported that the level of empathy seems to decline during medical education and residency.

Horsburgh and Ross (2013) studied newly graduated nurses’ \((n = 42)\) perceptions of compassionate care and factors that facilitate and inhibit its delivery. Data collected from this qualitative project suggested the support for the new nurses on compassionate care was eclectic rather than systematic. Participants identified the following themes and they reported a feeling of being “flung in at the deep end”, “left to sink or swim” and a concern by some of the staff that they were perceived as “ingrained in the woodwork” and “institutionally negative”. This study confirmed the notion that newly graduated nurses may not be as well prepared for the reality of delivering compassionate care as we have assumed.
Waugh & Donaldson (2016) described a study conducted to explore the learning that occurred from viewing and listening to narratives of compassionate care, and to identify students’ preferred storytelling formats as well as other uses of such strategies. A convenient sample of graduating seniors were identified to submit a short reflective journal (500 words) on a caring moment they had in previous clinical rotation. Four narratives were selected and later recorded (audio and video) for the participants to review. Students \( n = 13 \) were asked to listen to all four stories to provide feedback on what they learned from these stories using an open-ended 7-item questionnaire that addressed the aim of the study. Several themes emerged: person-centeredness, compassion, effective mentor support, authentic learning, emotion, and empathy were identified as key factors to acquire and deliver compassionate care by the students. The results of this study proposed the use of digital narratives (audio or video storytelling) to promote authentic reflective thinking and supportive discussion about compassionate care amongst the novice nurses.

**Summary of Review of Literature**

Transitioning newly graduated nurses into professional practice is a multifaceted and complex process. Much of the current literature has been focused on measuring and surveying their level of skills, the return on investment of the program, and/or competencies of the new graduates. Less is known about what it is like to be a new graduate nurse involved in a nurse residency program and what compassionate nursing practice is like from the perspective of the new nurses.

**Theoretical and Conceptual Frameworks**

Four complementary theoretical and conceptual frameworks were used to guide this project. They are the Kaiser Permanente Nursing Professional Practice Model (Voice of
Nursing), Jean Watson’s Theory of Human Caring, Jack Mezirow’s Transformative Learning, and David Kolb’s Experiential Learning Theory.

**Kaiser Permanente Nursing Professional Practice Model**

The Kaiser Permanente Nursing Professional Practice Model lays the foundation that makes care and nursing practice across the organization transformational. This model ensures that all nurses within Kaiser Permanente practice in a consistent manner regardless of the setting. At the center of the Kaiser Permanente Nursing Professional Practice Model is the patient and their family. The foundation of the model was built under the unique relationship shared between the nurse and the patient within a caring and healing environment. The model honors the unity of the whole human being – mind, body, and spirit, and values the practice of professional nursing. Six nursing values are embedded in the center of the model. The six nursing values are: patient and family centric, professionalism, teamwork, compassion, excellence, and integrity. Professional development, leadership, research/evidence-based practice, and quality and safety support the essential role and function of the Kaiser Permanente nurse and serves as the four key pillars of the model. The model aligns nursing with Kaiser Permanente’s mission.

Kaiser Permanente nurses advance the art and science of nursing in a patient-centered healing environment through professional practice and leadership. The goal of the model is to help patients and their families experience Extraordinary Nursing Care, Every Patient, Every Time (see Appendix E).

**Watson’s Theory of Human Caring**

Jean Watson’s Theory of Human Caring served as the theoretical framework for this project. Watson defined caring and compassion as the “ethical and moral ideal of nursing that
has interpersonal and humanistic qualities” (Jesse, 2010). This theory views nursing as a science and an art. Caring is the heart of nursing and has the purpose of “promoting healing, preserving dignity, and respecting the wholeness and interconnectedness of humanity”. Watson’s theory emphasizes the relationship between human caring and patient-centered care and is composed of ten carative factors: (1) Humanistic – altruistic system of values; (2) Faith-hope; (3) Sensitive to self and others; (4) Helping-trusting, human care relationship; (5) Expressing positive and negative feelings; (6) Creative problem-solving caring processes; (7) Transpersonal teaching-learning; (8) Supportive, protective, and/or corrective mental, physical, societal, and spiritual environments, (9) Human needs assistance; and (10) Existential-phenomenological and spiritual forces (Jesse, 2010). Watson describes a caring moment as “connecting of human spirits in a caring loving interaction exists in a timeless field of cosmic energy” (see Appendix F).

In a conversation with Dr. Watson at an annual Caritas conference on caring and compassion in Oakland, California (2016), Dr. Watson shared with this author the following, “Caring is the essence of nursing that may be this one (caring) moment, with this one person (patient), is the very reason we (nurses) are here on earth at this time”. She further described, “Healing is a complete spiritual practice and that we (nurses) touch more than their (patient) body, but their mind, heart, and soul … and that's compassionate caring practice”.

**Mezirow’s Transformative Learning Theory**

Jack Mezirow’s Transformative Learning Theory (TLT) was chosen to guide this project due to decades of research focusing on the area of higher education, reflective thinking, and experiential learning. Jack Mezirow’s Transformative Learning Theory (TLT) focused on what he described as “a critical dimension of learning in adulthood that enables us to recognize and reassess the structure of assumptions and expectations which help frame our thinking, feeling,
and acting” (Mezirow, 1997). TLT is a cognitive adult learning theory that results in changes in meaning perspectives that have developed over an individual’s lifetime based upon their life experiences (Mezirow, 2000). According to Dr. Mezirow (1997), learners develop their understanding and problem solving skills through experiences. During this process, learners acquire new information and subsequently establish a *habit of mind* in which they expect that what happened once will invariably happen again. Combined with previous experiences, learners can then engage in a continuous self-reflection process to evaluate and to improve their values, beliefs, and assumptions. As a result, learners will subsequently formulate better decision-making and critical thinking skills in the future (Mezirow, 1997). Mezirow’s transformative learning theory conceptualized and advocated the idea of creating a highly diverse mix of self-directed learners with the capacity to *critically reflect* and *dialogically collaborate*, as the core value and cardinal goal of effective teaching and learning in modern adults (see Appendix G).

Traditional nursing education grounded in mechanical and transmissive teaching can impede the understanding and process of lifelong transformative learning (Renigere, 2014). Transformative learning requires a deep structural alteration in the basic aspects of thinking, feeling, and behavior. It specifies a shift of consciousness that is related to our place on earth, our relationship with people, and the understanding of ourselves. Transformative learning in nursing education allows nurses to think reflectively as a result of their life experiences without ever thinking or asking questions. Transformative learning and self-reflective practice are not limited to the education process alone, but also associated with the display of the committed professional performance of a registered nurse in the healthcare setting (Renigere, 2014). Mezirow’s transformative learning and critical reflection theories (included in the toolkit).
provide a practical guide for this project aimed to cultivate and to sustain a competent future nursing workforce.

**Kolb’s Experiential Learning Theory**

David Kolb’s Experiential Learning Theory (ELT) defines learning as “the process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of grasping and transforming experience” (Kolb 1984, p. 41). It serves as the conceptual framework for the project to support the seamless integration of experiential learning and mindfulness in nursing education and practice. Kolb describes learning as a lifelong process resulting from continual person-environment interaction and involves feeling, thinking and behaving. This model conceptualizes learning as a process that integrates experience, perception, cognition, and behavior. Active experimentation occurs when learners have an opportunity to identify their areas of improvement, work to improve their clinical skills and knowledge, and then transfer these skills to a real clinical situation. According to Kolb, the learning cycle consists of four phases. They are (1) concrete experience (CE) where the learner participates in an experience such as a simulation, (2) reflective observation (RO) where the learner reflects on the experience, (3) abstract conceptualization (AC) where the learner considers thoughts and reflections to identify the significance of the learning experience and considers what may have been done differently to enhance the outcome, and (4) active experimentation (AE) which involves using what was learned to direct future practice (see Appendix H). Experiential learning is a process of constructing knowledge that involves a creative tension amongst the four learning modes (Yeganeh & Kolb, 2009).

As it relates to ELT, mindfulness provides a grounded explanation of the learning process of the mind when making sense of the environment (Yeganeh & Kolb, 2009). The mind make
sense of complex situations and environments by generalizing. According to ELT, rules and guidelines are abstracted (AC) from experiences (CE) which are then acted (AE) and reflected (RO) on. Incorporating mindfulness practices into experiential learning processes can help nurses become more intentional about how and when they learn. A practical model from mindfulness and experiential learning can also be used to develop the capacity to engage nurses to be more mindful and compassionate in their practice is included in the toolkit. (see Appendix I).

**Section III. Methods**

**Ethical Issues**

Participants for the study were recruited from the 2017 Regional new graduate transition to practice nurse residency program. A group of 29 newly hired registered nurses from five Kaiser Permanente Medical Centers were identified and subsequently recruited for the project. Project description and project procedures were explained verbally and a written consent was obtained prior to data collection. Confidentiality and use of personal mobile phone per institutional policy was explained. A copy of the Kaiser Permanente Social Media Policy and Guide was also distributed to all the participants. Participant rights were verbally explained and written consent was obtained prior to completing the first questionnaire. Participants were then guided to download the free mobile app and instructions were given on appropriate usage of the app during the nurse residency program.

Ethical principles for this project included: the concepts of beneficence, non-maleficence, fidelity, integrity, justice, and respect for the autonomy of others. Participants did not receive compensation for this project. This author did not receive compensation
from the organization and the mobile app was listed as free with no in-app purchase or any other fees associated with use. There were no other ethical issues or conflicts of interest notable for this project.

A University of San Francisco Doctorate of Nursing Practice project determination form was submitted and received approval by the program chair and committee members as non-research. (see Appendix J)

Setting

*Kaiser Permanente National*

Founded in 1945, Kaiser Permanente is the largest integrated healthcare delivery system in the United States, which includes 11.8 million members, 38 hospitals, 54,000 nurses, and over 21,000 physicians spanning over eight geographic regions. Kaiser Permanente is recognized as one of America’s leading health care providers and not-for-profit health plans. Three closely interconnected business entities are composed within the system: Kaiser Permanente Foundation Hospitals, The Permanente Medical groups, and Kaiser Foundation Health Plan. With an annual operating revenue of 64.6 billion (2016), Kaiser Permanente is one of the top healthcare corporations in the United States. The mission of Kaiser Permanente is to provide high-quality, affordable health care services and to improve the health of our members and their communities.

In accordance with Kaiser Permanente’s vision and mission, Kaiser Permanente’s nursing vision is to advance the art and science of nursing in a patient-centered healing environment through professional practice and leadership. Kaiser nurses believe in “Extraordinary Care, Every Patient, and Every time”.
Kaiser Permanente Southern California

Kaiser Permanente Southern California currently serves over 4.4 million members in Southern California, with over 7,200 physicians and more than 220 medical offices. Kaiser Permanente medical groups offer one of the most comprehensive integrated medical plans in California. The Regional Nurse Residency Program is a 10-week orientation and training program that encompasses both didactic and clinical experiences for a new RN recently hired into Kaiser Permanente Southern California. Designed to ease the transition of a new graduate RN into professional practice, the course learnings will strengthen their clinical and analytical skills, promote their professional growth, and establish their self-confidence and independence. Subject experts from local medical centers and regional offices will discuss key topics basic to all medical centers’ hospital nursing practice. Clinical topics include patient education, scope of practice, resource management, clinical judgment in nursing care, and wound/ostomy care. Leadership topics include inter-generational communication, conflict management and problem solving, and prioritization with delegation.

Incorporated throughout the curriculum are the Quality & Safety Education for Nurses (QSEN) competencies and Tanner’s Clinical Judgment Model. Evaluation of participants’ understanding is assessed through simulation lab (SIMs) scenarios, group discussions, activities, role-playing and clinical performance. Following completion of the program, the new graduates return to their medical center to continue their customized clinical orientation (http://kpnursing.org/_SCAL/professionaldevelopment/newgrad.html).

Nursing Residency Program Curriculum

The 10-week program comprised of two 8-hour days of didactic (week 1 and week 4), six 8-hour days (one day per week between week 2 and week 7) of clinical simulation with
debriefing and self-reflection, as well as over 300 hours working one-on-one with a trained preceptor in the clinical area. All newly hired nurses also attended a four day general orientation prior to the beginning of the nurse residency program. Program description, objectives, agenda, curriculum, simulation schedule, and related reading materials were provided to all participants at the start of the program.

Didactic content presented in the program include: Kaiser’s Mission, Vision, and Nursing Values; Professional Practice Model; Communication and Self-Reflection; Professional Role Development; Life Long Learning and the Science of Caring. Weekly simulation sessions covered disease management topics such as the use of high and low fidelity simulations on the management of a young adult with new onset diabetes mellitus, a middle-aged man with heart failure, an older woman with myocardia infarction, a homeless woman with pneumonia, a distressed woman with early signs of sepsis, and chronic pain management of a non-compliant adult. Standardized or Simulated patients (staff nurses and nurse educators) were used as patients and family members in three of the six simulation scenarios. Structural debriefing with self-reflection and discussion of competencies, skills, and behaviors were led by staff educators and professional development consultants at the end of each simulation day. A weekly self-reflective journal on their clinical performance was submitted each week for feedback. These exercises were intended to promote clinical competency, emotional intelligence, appreciative inquiry, and professional growth and development. Topics such as, SBAR (Situation, Background, Assessment, Recommendation) Communication Tool, TeamSTEPPs®, NKE (Nurse Knowledge Exchange), Care experience, Professional Portfolio, and Peer-to-Peer feedback were also discussed.
A state-of-the-art mobile app and toolkit was introduced as a QI pilot project for the Kaiser Permanente Southern California nurse residency program in February 2017.

**Planning the Intervention**

**Description of Intervention**

The project plan is grounded on the test of change technique of the Plan-Do-Study-Act (PDSA) cycle (Shoemaker, 2009). The PDSA cycle is used to develop or improve a design of a process, product or service. The PDSA cycle consists of four steps (see Appendix K). The cycle begins with Plan. The Plan (P) step involves establishing a realistic goal, defining success metrics and putting a plan into action. For the project, the goal is to successfully launch and test the functionality and productivity of the mobile app for the newly graduated nurses in the program. Various measurement metrics were collected and evaluated by this author to create future action plans for potential expansion.

During the Do (D) phase, components of the plan were created and implemented. In this project, a smartphone app and toolkit was developed, implemented and evaluated. The toolkit includes: a mindfulness practice and meditation guide, reflective practice exercises, virtual storytelling videos instructions, and care science. All printed materials used during the nurse residency program were digitalized as well as links to reading materials, websites, and helpful resources were included on the app and toolkit.

For the Study (S) step, feedback from the stakeholder groups (nurse residents, staff educators, education consultants, and leaderships), workability of the mobile app (beta and alpha testing), and areas of improvement of the toolkit (validity of the materials) were assessed and examined.
The last phase is Act (A). The Act step closes the PDSA cycle, integrating the learning generated by the process, and implementing changes identified for continual improvement. In this step, a professional poster was created by this author to disseminate the various learnings acquired from the project. The poster was presented at the Kaiser Permanente Southern California Patient Care Services nurses week celebration (see Appendix L).

**Purpose of Interventions**

Newly graduated nurses are faced with many challenges as they transition from an educational to practice setting. These challenges include role stress, skill deficiency, clinical competency, and lack of confidence. According to Benner (1984), formal models and theories from textbooks are inadequate to illustrate today’s complex practice environment. Needed experience and subsequent mastery of knowledge, skills, and attitudes are attained through stages of novice, beginner, competent, proficient, and expert. Newly graduated nurses must also learn to socialize into the culture of the healthcare work environment.

The millennial learner’s tendency to multi-task, be tied to electronics, and their need to receive instantaneous feedback challenges traditional methods of teaching. McCurry and Martins (2010) found that millennial learners respond to group assignments rather than working on their own. They are not comfortable with open, direct, face-to-face criticism or class confrontation with faculty.

The purpose of interventions is to create a state-of-the-art smartphone app with an up to date, easy to access, multipurpose toolkit that can be distributed to all newly graduated nurses during the nurse residency program in February 2017. The intention is to leverage the power and the convenience of the latest mobile technologies, multimedia platforms, peer-to-peer support,
and social connectedness of the learners to enhance clinical competency and professional practice.

**Implementation of the Project**

**Smartphone App Development**

The development of the evidence-based mobile learning app took the author approximately five months to complete. It consisted of designing the user interface, drafting the storyboard, creating the layout, coding the program, and verifying the content. The author elected to attend a three month online instructional course on smartphone mobile app development from the University of California, Irvine through Coursera, a virtual university company. With the assistance of a student from the local high school, the mobile learning app was developed, beta-tested, and submitted to the Apple Mobile Application Developer for review and publication. Sample screenshots of various features and functions of the smartphone mobile app (iOS platform) can be found in Appendix M.

**Smartphone App Beta Testing**

According to Hanrahan, Aungst, & Cole (2014), a systematic review and evaluation helps to ensure the usability and feasibility of newly developed mobile applications. It should include the following criteria and guidelines. The usefulness, accuracy, authority, objectivity, timeliness, functionality, design, security, and value of the app are some of the basic elements subject for review. A comprehensive review of the mobile app was conducted with all materials validated by two content experts. Additional technical support and program optimization was provided by the Apple Mobile Application Development Team online. A final draft copy of the mobile app was submitted to two professional development and education consultants for reliability and validity appraisal. Beta testing was completed in January 2017.
Nurse Residency Program Toolkit Development

A growing body of evidence on mindfulness and mindful practice for healthcare professionals has emerged in recent years (Lauire & Blandford, 2016). Kabat-Zinn (1990) advocated a Mindfulness Based Stress Reduction (MBSR) course that provides a series of techniques to cultivate mindfulness. Practice exercises such as attention focusing, body scanning, breathing exercises, and yoga-based activities are ways to help cultivate a self-awareness and emotionally balanced state. A simple breathing exercise with guided instruction was included in the mobile app for newly graduated nurses to enhance their physical and psychological well-being. Additional resources (printed materials, websites, blogs, and other mindfulness/meditation apps – Calm.com; Buddify; Headspace) to support these practices were also included. Participants were instructed to review and practice the exercises daily while attending the residency program. Appendix N highlighted some of the resources available.

Reflection is a process of learning from experiences, considering and evaluating prior knowledge based on these experiences, and then incorporating them into future practice. Self-reflection is vital to the success of nursing practice. In the context of this project, a self-reflective practice toolkit, based on the Tanner’s Clinical Judgement Model currently used in the nurse residency program, was digitally recreated for the newly graduated nurses. An electronic template was created based on this model to facilitate clinical judgement, self-reflection, and professional growth (Appendix O). Participants shared their weekly self-reflection with their peers anonymously using this template via the secured mobile app. Previously, this practice was conducted in a face-to-face seminar discussion format each week.

Storytelling can be a powerful tool to aid learning from a particular event or situation. Digital narratives in the form of videos can provide novice nurses opportunities to experience,
reflect, and describe the situation or event. Often time, newly graduated nurses do not possess the necessary depth of knowledge or exposure on handling complex and challenging patient situations. By viewing patient care experiences via storytelling videos on the mobile app, participants were asked to reflect on their virtual practice and compassionate care. A series of videos were incorporated into the mobile app with instructions and reflection questions provided in the toolkit. Appendix P provided a snapshot of the process.

**Planning the Study of the Intervention**

**SWOT Analysis**

A strength, weakness, opportunity, and threat (SWOT) analysis was conducted to identify the current state of the internal and external environments including strengths and weaknesses of the mobile app as well as threats or opportunities on the implementation of the toolkit. (see Appendix Q). Internal strengths of the mobile app include: ease of use, low cost, customizability, rich content information and format, just-in-time learning, timely feedback, and support. External strengths include: innovative idea, social media connectivity, academic-service partnership, and marketability. Some of the internal weaknesses include: resource intensive, costs to update, variable learning style, technology dependent, and difficulty to scale. External weaknesses include: market driven technology, single purpose product, limited market share, and sustainability.

**Critical Milestones**

A Gantt chart for the project was drafted initially in December 2015 and revised in July 2016 to reflect the changes on various milestones, project phases, specific tasks, and work breakdown. This chart was used throughout the project to monitor the overall progress and work stream. (See Appendix R)
Project Controls

By using the SWOT analysis and Gantt chart, the author established a work breakdown structure, a project timeline, a series of milestones, and a budgetary goal to ensure that the project scope was being followed. The intended changes and improvements were discussed with the DNP project committee chairperson, education team, and regional peer groups. The impact on the stakeholder groups was captured and reported accordingly.

Project Leadership

The project was led by this author, a DNP student, and one other professional development and education consultant from the regional office. This author has more than twenty-five years of clinical and academic teaching experiences with the last three years in his current position as a professional development and education consultant at the Regional Office. Additional project leadership support was guided by the DNP project committee and its members. Project approval was obtained from the Regional Nursing Education Director and the Senior Vice President of the Clinical Practice Team.

Project Support and Resources

The Regional Patient Care Services Professional Development and Education Team supported this quality improvement change project. The project workflow aligned with the objectives of the nurse residency program and organization’s goals.

Methods of Evaluation

A pre-post test format was used to answer the following questions: What stressors and/or challenges were experienced by newly graduated nurses in a nurse residency program during the first year of employment? What similarities or differences in demographic profiles, skills, or procedures they found difficult with their level of comfort and confidence in their new role, job
satisfaction and caring practice? What level of self-compassion did newly graduated nurses possess at the beginning and at the end of their nurse residency program? What experiences and/or learning did newly graduated nurses acquire during debriefing and on self-reflective practice?

Weekly formative evaluations and feedback were collected from the participants for the pilot quality improvement project. A summative evaluation was conducted in small focus groups as well as written evaluation of the addition of the mobile app and toolkit to the program by all participants. The three written surveys conducted in this project were the Casey Fink Graduate Nurse Experience Survey, the Neff Self-Compassion Scale, and the Debriefing Experience Scale.

**Casey Fink Graduate Nurse Experience Survey**

The Casey-Fink Graduate Nurse Experience Survey (CFGNES) was used in a pre- and post-intervention (mobile app and toolkit) design to identify the perceived stressors and challenges that might impact the self-confidence and experience of the newly graduated nurses (see Appendix S). The GFGNES was designed and validated by Dr. Regina Fink and Kathy Casey, MS, RN as part of their ongoing work on exploring the newly graduated nurses’ experiences during their first year of practice. The Casey-Fink Graduate Nurse Experience Survey is composed of five sections. It measures (1) support, (2) patient safety, (3) stress, (4) communication/leadership, and (5) job satisfaction. In addition to the quantitative section there are qualitative questions in the instrument, in which this project did not include. Items in the first section asked respondents to identify top skills or procedures they are uncomfortable performing independently. Items in the second section were composed of questions using a 4-point balanced response format (strongly disagree to strongly agree) and additional questions where respondents answered yes or no to a series of stressors. Items in section three asked
CULTIVATING A CULTURE OF COMPASSION

respondents using a 5 point Likert scale format (very dissatisfied to very satisfied) on job satisfaction. Section four included a series of select all that apply questions asking respondents challenges they faced during the transition. Section five pertained to questions about demographics of the respondents. The quantitative scoring of the Casey-Fink comes from summing items in the second section. The reported reliability estimate (Cronbach $\alpha$) was $\alpha = 0.71$ to 0.90 from previous studies (Altier & Kresk, 2006; Anderson, 2009; Fink et. al., 2008; Goode & Williams, 2004; Kowalski & Cross, 2010; Williams et. al., 2007).

Self-Compassion Scale

Self-compassion is a Buddhism tradition annotating compassion for oneself. Neff (2003b) describes self-compassion as encompassing self-kindness, common humanity, and mindfulness in opposition to self-judgement, isolation, and over-identification. According to Neff (2009), self-compassion implies movement and motivation towards balance, health, and wellbeing of oneself. The Self-Compassion Scale is developed to measure self-compassion in individuals and was chosen for this project to measure the level of self-compassion amongst newly graduated nurses. Additionally, mindfulness has been proven to be positively associated with self-compassion, as it involves awareness of one’s suffering in the present moment without judgement.

The Self-Compassion scale (SCS) is a 26-item scale designed to measure self-compassion (see Appendix T). The SCS is designed to obtain a total score of self-compassion as well as assessing the subscales of self-kindness, self-judgement, common humanity, isolation, mindfulness, and over identification (Neff, 2003b). A total self-compassion score is derived by averaging all the item scores. Responses are given on a 5-point scale from 1 (almost never) to 5 (almost always). Higher total scores denote high levels of self-compassion. The reported
reliability of SCS (Cronbach $\alpha$) was between $\alpha = 0.90$ to 0.94 from previous studies (Neff et al., 2007; Van Dam et al., 2011; and Raes, 2009).

**Debriefing Experience Scale**

Feedback, including debriefing, is one of the most important parts of experiential learning in nursing education and training. Guided reflection, as a part of debriefing, derives the underlying meaning of experiential learning. Debriefing enables participants to understand, analyze, and synthesize their thoughts, feelings, and actions in learning. The Debriefing Experience Scale consists of 37 items with a Likert-type rating system with 1 (strongly disagree) and 5 (strongly agree). The Debriefing Experience Scale was administered to all the participants at the end of the 10-week nurse residency program (see Appendix U)

**Analysis**

No specific software or statistical tools were used to analyze the quantitative data for the project. All calculations were done using a simple calculator and imported onto an Excel spreadsheet. Tables and diagrams were created to illustrate project data, results, and relationships. Qualitative data and anecdotal notes were collected in focus groups and exit surveys but no specific interventions were used to analyze the data at this time. A simple standard deviation method was employed to tabulate each of the items on the Casey Fink Graduate Nurse Survey, Self-Compassion Scale, and Debriefing Experience Scale.
Section IV. Results

Program Evaluation and Outcomes

The overarching goal of the project is to identify practical strategies that will cultivate and sustain a competent and compassionate nursing workforce. The purpose of this evidence-based, change of practice, and quality improvement project was to develop, implement, and evaluate the use of an evidence-based transition to practice mobile app and toolkit for newly graduated nurses. In addition to these interventions, measurement of success include a decrease in turnover rates, a decrease in burnout, an increase in retention, and an increase in job satisfaction amongst newly graduated nurses.

Project Evaluation

Nurse residents from the February 2017 cohort were invited to participate in the project. A convenience sample of 29 newly graduated nurses from 5 Kaiser Permanente Hospitals in Southern California were asked to take the survey. Group sessions were held during the first day of orientation to introduce the project and the mobile app to the participants. Consent was obtained and project instructions were given to the potential participants. All 29 nurse residents agreed to participate and the survey was administered via paper and pencil. This author conducted the survey and results were collected and stored securely in the Kaiser Permanente regional office and on an encrypted flash drive.

Demographics

Program participants ranged in ages between 23 and 37 years, with a mean age of 27 years. Of the 29 nurse residents, 24 (83%) were female and 5 (17%) were male. There were 13 Hispanic (45%), 10 Asian (35%), 4 White (13%) and 2 Black (7%) participants in the program. Educational degrees are as follow: 14 from a BSN program (48%), 12 from an ADN program
(41%), and 3 reported to also have their MSN degrees (11%). Almost all participants, 27 (93%) were hired to the medical and surgical unit, with two into specialty areas (telemetry and post-surgical recovery units) at the time of employment. Three participants reported to have prior healthcare work experience and one previously worked for Kaiser Permanente. All participants reported to own a smartphone (Apple iPhone – 83%; Android smartphones – 14%; and others – 3%) or portable devices (iPad – 30%; others – 10%) that can access the mobile app. Participants who do not wished to install the mobile app were given the option to receive identical content materials electronically or in print. All residents agreed to participate in the project and successfully downloaded/received the mobile app and toolkit.

**Transition to Practice Gap**

The Casey-Fink Graduate Nurse Experience Survey (CFGNES) was used in a pre-and post-intervention (mobile app and toolkit) study designed to examine the perceived stressors and challenges that might impact the self-confidence and experience of newly graduated nurses during transition to practice. Of the 24 item questionnaire on potential stressors or challenges, several themes emerged that had a negative impact on their transition to practice. On survey question 1 and question 4 about professional communication, 58% stated a lack of confident communication with physicians and 72% of the respondents reported difficulty asking for help from other RNs. More than 75% of the nurse residents identified being overwhelmed by patient care responsibilities and workload. A mixed result was reported on tasks completion and self-confidence, with a majority of the respondents replying neutrally for question 12 (“I am able to complete my patient care assignment on time”) and question 14 (“I feel prepared to complete my job responsibilities”). Consistent with other studies, respondents in this cohort also identified a lack of confidence in managing conflict and difficult situations as significant stressors. More
than half of the respondents answered question 17 unfavorably stating a feeling that they might harm their patients due to a lack of knowledge and experience. And almost 60% reported being uncomfortable and not knowing what to do for a dying patient. Time management and prioritization continue to be major challenges for newly graduated nurses. Twenty-three (80%) of the respondents cited difficulty prioritizing patient care and 72% reported concerns about organizing patient care and meeting their needs.

Overwhelmingly, almost all respondents feel that their work is exciting, that they are supported by their friends and families, and that they chose the right profession. Respondents also identified the availability of positive role models that they observed on the unit (79%) but over 80% felt uncomfortable asking them for help. When asked about existing stressors in their personal life, most respondents (76%) described them as moderate or manageable with job performance and relationships being the top two concerns. In terms of job satisfaction, salary and career advancement rated the highest with job responsibility and time-off (vacation) being the lowest in this cohort. Despite the small population size, several consistent and remarkable findings emerged aligning with existing evidence and this author’s project plan.

**Self-compassion and Mindfulness**

The 26-item Self-Compassion Scale was used to identify the level of self-compassion at the beginning of the nurse residency program amongst newly graduated nurses. A second survey using the same tool was administered at the conclusion of the program and a pre-post intervention analysis was conducted on three of the six subscales. Participants’ average self-kindness (being gentle, supportive and being understanding towards self) subscale scores increased by 38% (from 6.8 to 11.1) and average mindfulness (being aware of one’s present moment experience of suffering with clarity and balance) subscale scores increased by 20%
(from 12.3 to 15.2). Common humanity (recognizing the shared human experience, understanding that all humans fail and make mistakes) subscale scores increased by 35% (from 10.4 to 16) indicating a significant growth post intervention.

Admittedly there might be other contributing factors for this growth. For instance, clinical exposure, preceptorship experience, professional maturity, or simply the length of time the participants were in the role and functioning as a registered nurse. Even if there may not be clear indicators suggesting a direct correlation, the findings are very encouraging. Future modifications might include incorporating a qualitative study design with additional measurements and descriptions of live experiences of newly graduated nurses on self-compassion.

**Experiential Learning and Reflective Practice**

The 20-item Debriefing Experience Scale (DES) was used to assess the effectiveness of debriefing and reflective practice by newly graduated nurses. Respondents to the DES described an overall positive debriefing experience and viewed reflective practice as an enlightened exercise that can help support their transition to practice from a university setting to a hospital setting. Over 75% of the respondents stated debriefing helped them analyze the situation objectively and enabled them to put emotions and judgements aside. About 80% agreed that reflection helped them realize their own feelings and concerns during a stressful situation (reflection-in-action) and that “reflection on action” provided an opportunity to improve future care. More than half of the respondents thought their unsettled feelings from the situation (simulation) were resolved by debriefing and self-reflection. The addition of digital narratives (virtual video stories) further reinforced learning and peer-to-peer feedback via a mobile app (reflection exercises) that gave them an opportunity to support each other virtually. When asked
about their abilities to make connections with theories, 88% of the respondents cited debriefing helped them understand the content material better and also gave them the ability to anticipate proper outcomes of the intended treatment plan. A majority of the respondents described that debriefing was constructive and supported by the facilitators and their peers. However, reflection via the mobile app lacked the human connectiveness between the facilitators and the residents. One of the participants stated, ”I liked the extended connections I have with my co-workers that we can support each other even virtually, but I am not sure if others will take advantage of the opportunity as much as I do!”

**Program Outcomes**

The overarching goal of the project was to identify practical strategies and resources to cultivate and sustain a competent and compassionate future nursing workforce. The outcomes of this quality improvement project are threefold.

**Intervention 1 – Mobile App**

First, the development, implementation, and evaluation of a state-of-the-art smartphone app was completed by the end of the first quarter in 2017. The smartphone app was successfully launched and seamlessly integrated into the existing nurse residency program. Program evaluation and feedback from the stakeholders were collected and analyzed. This author met with four of the project participants in an exit meeting at the end of the program to collect additional feedback regarding the smartphone app. Overall, feedback was positive and several valuable suggestions were offered by the participants for future development and improvement.

Theme 1 – Information and content materials of the program were easily accessible and can be retrieved anywhere, anytime. One of the project participants noted, “I don’t need to carry my laptop anymore, all the information I needed was on my cellphone.” Another participant
added,” I think this is a wonderful idea! I love to review the materials while I am waiting for class and now I can simply tap and learn!” A third participant noted, “I like how we can connect and share our thoughts and ideas using the app, sometimes it’s overwhelming when you are alone, especially when you are new.” These comments resonated with previous findings that newly graduated nurses, especially during the first year of transition, welcome the guidance and support of other nurses.

Theme 2 – A significant increase in engagement and participation by the participants was observed. A staff educator stated, “I’ve noticed something is different with this group … they are more prepared, even early in the morning!” One of the simulation nurse educators said, “I’ve never seen such an energetic group, so eager to participate in sim … they are more prepared too!” A department manager observed a small group of participants using their smartphones in front of the classroom and jokingly asked, “Are you checking the weather or texting your friends?” The participants politely replied, “We are doing research … the story of this patient (part of the video narrative) lets us know more (individualized care)”. The participants identified their concerns of the (fictitious) patient situation and immediately posted them for feedback. Previous studies have indicated that the importance of frequent engagement and immediate feedback is coveted by the millennium learners. The desire to grow is palpable amongst this group and the ability to virtually connect learners using a mobile app further enhances teamwork and collaboration.

Theme 3 – A genuine spirit of appreciative inquiry and peer-to-peer support was evidenced through using the mobile app. This author noticed an open and authentic dialogue amongst the participants throughout the program. The comments they posted and feedback they received from each other offered valuable insights into the live experiences of a newly graduated
nurse. It also offered faculty unprecedented opportunities to further support the growth and the
development of the novice nurses. The successful adoption of appreciative inquiry along with
supported peer-to-peer feedback was highlighted by this mobile app.

**Intervention 2 – Learning Toolkit**

Secondly, the materials and resources incorporated in the toolkit were effectively
disseminated and utilized by the participants throughout the nurse residency program. The
toolkit’s mindfulness practice and meditation guide, reflective practice exercises, and digital
narratives on the science of caring provided participants additional resources and support during
this critical phase of their nursing career.

Another aspect of the evaluation was looking at how having access to the toolkit’s
components impacted the experiences of the preceptors, staff educators, managers, and faculty.
As noted, components of the toolkit were multifaceted and dynamic. Participants were
encouraged to share the information in the toolkit with their preceptors and managers whenever
appropriate. Previous studies have indicated possible disconnection and miscommunication
between staff educators, preceptors, and managers on the progress of the newly hired nurses
during their nurse residency program. Furthermore, information sharing between the participants
and their preceptors were vital to the wellbeing of the patient and the organization. This warrants
future projects on understanding the potential effects of the toolkit on preceptors and patients.

The toolkit will be reviewed and revised annually to reflect current practice and
organizational goals. One unintended outcome of the toolkit that this author observed was the
eagerness and energy of the program content review and updates by participants. Collaborations
between preceptors, staff educators, education consultants, and department managers were also
notably enhanced.
**Intervention 3 – Mindfulness Practice**

One of the interventions this author set out to accomplish was to identify practical strategies or ways for novice nurses to enrich their understanding of caring and practicing compassion using mindfulness exercises. Three specific mindfulness activities were introduced in the program. They were Deep Cleansing Breathe technique, Count to 10, and 2 Minutes Stillness. In addition, Jean Watson’s ten carative factors: (1) Humanistic – altruistic system of values; (2) Faith-hope; (3) Sensitive to self and others; (4) Helping-trusting, human care relationship; (5) Expressing positive and negative feelings; (6) Creative problem-solving caring processes; (7) Transpersonal teaching-learning; (8) Supportive, protective, and/or corrective mental, physical, societal, and spiritual environments, (9) Human needs assistance; and (10) Existential-phenomenological and spiritual forces were added to the toolkit.

Participants were made aware of the information and resources available and were encouraged to access the materials at their own pace. Since mindfulness practice or meditation cannot be mastered overnight, the potential impact of these activities cannot be properly measured at the time of the conclusion of the nurse residency program. Comments by the participants included, “These are great exercises, I will give them a try”, “I am not sure if I can keep up, but they sure look fun”, “I’ve been using the deep breathing technique and it is helping me during stressful situations”, “I am so busy at work, I just needed to set an alarm …”, and “I hope my unit will use mindfulness practices in our morning huddles, I think it would be helpful for all of us (patients included)”.

Since Jean Watson’s theory on caring and compassionate practice is not part of the nurse residency curriculum, it was not discussed in detail or utilized by the participants in practice. However, future plans might include a discussion with the regional education and research team.
to investigate the implication for incorporating some of the caring science principles into the program.

**Financial Outcomes**

A plan to capture the Return on Investment (ROI) is used to demonstrate the time frame that the invested project resources will be recovered by the organization making the investment. The expected financial recovery might include a higher retention of the newly graduated nurses, a reduction in clinical practice errors, and an increase in job satisfaction and confidence. However, due to the nature of the project, the expected benefit or recovery of investment may need up to three years of data to capture and analyze. A proposed budget for this project is formulated (see Appendix V) and an approximated returned on investment is calculated (see Appendix W).

**Section V. Discussion**

**Summary**

**Key Successes**

The QI project was considered a success. This was demonstrated by meeting program objectives on time, developing and implementing all three interventions with positive feedback, disseminating project outcomes and lessons learned to stakeholder groups, and identifying areas of future improvement.

**Key Findings**

Findings of the project were encouraging and supportive of the overarching goals set forth by the author. Stakeholders were intrigued by the aim of the project and were enthusiastic to participate. Buy in from the participants and staff educators were instantaneous since the mobile app platform was familiar and freely available. The complexity of designing, testing,
evaluating, and measuring a state-of-the-art mobile app was unexpected but exhilarating to complete. Important lessons learned from this QI project includes: (1) the scope and scale of this project could have been clearer and more concise, (2) the spread and socialization of the mobile app was seamless only due to the nature of the selected population and that it might have been more challenging with other groups, (3) the costs of the project might have been prohibited for some hospitals and academic and service partnerships were vital to the continuing success of the project, (4) mindfulness and reflective practices are lifelong learning goals for individuals and the organization, and (5) transformational leaderships across the continuum were fundamental to sustaining the aim of cultivating the culture of a competent and compassionate nursing workforce.

**Change Sustainability**

Three specific strategies to foster sustainability were identified. First, a key to the success for this quality improvement project is the immediate buy-in from all the stakeholder groups. Continued success of this project will depend on the scalability of the product and acceptance of the process by future stakeholder groups. The belief is that this unique opportunity to change practice via the use of a low cost mobile app and that the expansion of our knowledge, skills, and attitudes in compassion and caring practice is universal. Second, the continuing efforts to recognize and to enhance patient care experiences is paramount to the high quality and safe patient-centric care. Mindfulness and self-reflection are critical change agents that can influence practice at all levels. The goal to sustain an organizational effort to create a culture of mindful clinicians is required for the survival of future healthcare organizations of any size or scope. Finally, the profession of nursing at large can benefit from our continued success of being the most trusted professionals in the country. Nursing scholars continue to advocate the need to
cultivate a culture of competent, caring, and compassionate nurses to ensure the delivery of honest, respectful, and loving care.

**Dissemination Plan**

Immediate plans to disseminate findings of the project externally include the community of nursing, academic and professional organizations, speaking engagements and poster presentations, and submissions in peer-reviewed publications. Internally, the added value of mobile learning technologies as well as strategies to cultivate individual and organizational compassion can be shared via the Southern California Regional leadership team, local medical centers, internal publications, newsletters, and departmental and peer group meetings. Future plans include partnering with technology firms and industry vendors, collaborating with academic research teams to further investigate this concept, exploring opportunities in the mobile learning app marketplace, and advancing evidence-based practice.

**Relation to Other Evidence**

The primary focus of this project is bridging the educational to practice setting gap by utilizing the nurse residency program model. Equally important are the use of other strategies such as nurse externship programs, capstone pre-licensure clinical courses, post-licensure transition to practice certifications, and/or pre-employment internship training programs. The literature review for this project was limited to contemporary nursing studies. However, researchers from other disciplines such as psychology, sociology, computer science, philosophy, and business leadership may benefit from scholarly partnership and collaboration to advance knowledge on compassion, mindfulness, and reflective practices that support service providers and institutions small and large. Lastly, project findings can be submitted to the United Kingdom
National Health Services’ evidence-based transition of care model integrating the science of caring and compassion into every aspect of patient care will benefit patients and their families.

**Implications for Nursing**

The humanistic meaning and value of caring in nursing practice is not new. Empathy and compassionate care constitutes the cornerstone of patient care and arguably the core characteristics and essential elements of all nursing functions (Bauchat et al., 2016). The authentic practice of kindness through empathetic communication between healthcare providers and patients is unmistakably one of the critical links in ensuring quality of care and minimizing the potential risks of human errors. The added value of innovative simulations and mobile technologies deepens the essence of lifelong learning goals amongst novice and expert nurses alike. Opportunities to innovate in simulation exist for those who fully embrace the humanistic value and meaning of caring and compassion whether it’s innate or learned.

**Limitations/Barriers to Implementation**

As in the case with all studies, the findings of this project should be interpreted within the context of its limitations. This was a quality improvement project of newly graduated nurses in one program with a relatively small sample size. Since this is a pilot mobile app developed by the author without any previous reliability and validity studies, generalizability of the findings to other nurse residency programs is problematic. Participants’ self-reporting during the pre and post implementation phases are subjective and may not be entirely representative of their abilities. Although the use of social media is expected amongst this demographic, the author noticed a limitation in open dialogue existed between program facilitators and newly hired nurses due to the nature of their respective roles.
Implications of the Project

The goal of this transformative quality improvement project was to foster the continuous development of compassion and to cultivate the provision of a kind and caring relationship between the nurse and the patient. This is a vital component of newly graduated nurses during their transition to practice period. Good quality patient-centered care takes place within relationships. Building and sustaining such relationships between a nurse and a patient requires meaningful conversations and kindness. Nurses who choose to be in this profession must demonstrate effective communication, caring, compassion and be open to each other’s worldviews. Empathy is the condition for compassion and a nurse’s ability to sense their patient’s pain or grief will evoke this compassion (Cingel, 2014). The opportunity to provide compassionate care is what motivates many of us to join the nursing profession. Compassionate behavior encompasses a variety of knowledge, skills, and attitudes within the realm of evidence-based nursing practice. There are implications for undergraduate nursing programs to instill both technical and non-technical skills into our future nurses. Innovative learning strategies and approaches are the keys to enhance the success of newly graduated nurses transitioning into clinical practice. Newly graduated nurses must continue to strive for evidence-based practice. Solutions are accessible for academic and service partners to collaborate through simulation innovations and discoveries. Opportunities to develop joint academic and service interprofessional simulations to enhance communication and empathy are invaluable. School-based simulation and hospital-based simulation educators must work together to leverage the art and science of innovative simulation with their patients and families to establish a mutually trusting relationship in order to provide the best care imaginable. Best practices and high quality patient care delivery serves as the impetus for executive nurse leaders to seek and support new
innovations and opportunities to advance professional growth and development of the future nursing workforce.

**Conclusion**

The use of mobile learning technologies such as mobile apps are becoming more popular with nursing students and nurses. These technologies and learning platforms will continue to mature in healthcare education and clinical settings for years to come. Although program participants in this project were limited, the increase in their competency and compassion is promising. Further development in mobile learning applications will benefit the nursing profession. The multiple accolades with this QI project has inspired others to create innovative and dynamic educational content and delivery methods beyond the traditional blueprints of teaching.

Self-reflection will continue to play an important role in the profession of nursing. Program participants in this project reported an increase in knowledge base and a desire to continue to utilize self-reflection and peer-to-peer feedback to enhance their clinical decision-making skills and team work was encouraging. Nurse educators, preceptors, and managers must continue to inspire and support newly graduated nurses on their endeavors and to co-create a high quality and safe care delivery environment.

The use of mindfulness to cultivate self-compassion was inconsistent amongst this cohort of newly graduated nurses. Previous evidence suggested that the practice of mindfulness is a gradual and persistence process. Hospital administrators and nurse leaders must continue to nurture and develop a competent and mindful nursing workforce. A culture of compassion in nursing must be sustained regardless of the various external and internal challenges that may
arise in the future. Nurses must continue to thrive and to succeed in providing “Extraordinary Care, Every Patient, Every Time”.

Section VI. Other Information

Funding

The author received a generous educational scholarship from the Association of California Nurse Leadership (ACNL) in 2017 to support the development of the mobile app and video recording equipment for the media content in the toolkit. Consistent with organizational policy and practice, ACNL did not participate in any aspects of data collection, evaluation, and reporting of the project. No further source of direct financial support or funding was involved in the development, implementation, or interpretation of this quality improvement project. The approval Statement of Determination Form for the project is provided in Appendix X.
Section VII. References


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CULTIVATING A CULTURE OF COMPASSION


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Section VIII. Appendices
## APPENDIX A

### Kaiser Permanente SCAL Nurse Residency Program

**Program Objectives** (revised February 2017)

Upon completion of this 10-week program, participants will be able to:
- Discuss scope of practice and role based competency as core elements to professional practice.
- Identify and define critical thinking skills and habits of the nurse mind.
- Demonstrate critical thinking skills in problem solving within the healthcare setting.
- Demonstrate effective communication skills when prioritizing, delegating, problem solving resolving conflict.
- Practice Quality Safety Education for Nurses (QSEN) competencies when planning providing patient care.
- Identify and describe how to access appropriate resources

<table>
<thead>
<tr>
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<th>Theme</th>
<th>Topic</th>
<th>Methodology</th>
<th>Materials</th>
</tr>
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<tbody>
<tr>
<td>One (8 hours)</td>
<td>General Session Day 1</td>
<td>Orientation Introduction KP Nursing</td>
<td>Didactic Interactives</td>
<td>Printed Materials</td>
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<td>Two (8 hours)</td>
<td>Professionalism</td>
<td>Professional Role</td>
<td>Simulation Self-Reflection Documentation</td>
<td>Mobile App</td>
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<td>Three (8 hours)</td>
<td>Teamwork</td>
<td>Communication SBAR, NRE+</td>
<td>Simulation Team building Communication</td>
<td>NG Toolkit</td>
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<td>Four (8 hours)</td>
<td>Patient-Centered Care</td>
<td>Care Experience Group discussion</td>
<td>Simulation Self-Reflection</td>
<td>Mobile App</td>
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<td>Five (8 hours)</td>
<td>General Session Day 2</td>
<td>Professional Development</td>
<td>Didactic/Interactives</td>
<td>Printed Materials</td>
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<td>Six (8 hours)</td>
<td>Compassion</td>
<td>Caring/Empathy Digital narratives Video Storytelling</td>
<td>Simulation Mindfulness Self-Reflection</td>
<td>Mobile App NG Toolkit</td>
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<td>Seven (8 hours)</td>
<td>Integrity</td>
<td>Peer-to-Peer Feedback Support</td>
<td>Simulation Authentic Leadership</td>
<td>Mobile App</td>
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<tr>
<td>Eight (8 hours)</td>
<td>Excellence</td>
<td>QSEN MAGNET Program Summary</td>
<td>Simulation</td>
<td>Mobile App NG Toolkit</td>
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<tr>
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<td>Clinical Preceptorship at Medical Center*</td>
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<tr>
<td>Ten</td>
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Mobile app – KP Sparks and SLACK
Toolkit - mindfulness practice/meditation guide, reflective practice exercises, virtual storytelling videos instructions, and care science.
Preceptorship – Approximately 300 hours of clinical preceptorship thought out the 10-week program
APPENDIX B

Kaiser Permanente Nursing Values, Vision, and Professional Model

Kaiser Permanente Nursing Values
- **Professionalism** – We believe in the value of our profession and maintain standards of excellence when it comes to the delivery of care.
- **Patient and Family Centric** – Honoring the essential role of the patient and family in all aspects of care, we create memorable moments through extraordinary care.
- **Compassion** – We realize the difference we make in the lives of our patients and their families when they are most vulnerable and we focus on providing individualized care with a personal touch.
- **Teamwork** – We respect the collective contributions of each member of the team and view our team members as our partners in success.
- **Excellence** – We embrace the art and science of nursing by integrating the ANA’s “Scope and Standards of Practice” with compassionate care and an evidence-based practice.
- **Integrity** – We acknowledge the autonomy and dignity of the patient and promote the patient’s right to choose and control his or her environment.

Kaiser Permanente Nursing Vision
- Kaiser Permanente nurses advance the art and science of nursing in a patient-centered healing environment through our professional practice and leadership.

**Extraordinary Nursing Care**
**Every Patient**
**Every Time**

What is the Kaiser Permanente Nursing Professional Model?
At the heart of the Kaiser Permanente integrated nursing model are our patients and their families. The nurse-patient family relationship is the cornerstone of nursing practice and leverages the powerful role human relationships play. It honors the unity of the whole human being – mind, body, spirit – and is the lens through which our nurses look to ensure that they meet the needs of the patient and families. Six nursing values are embedded in our discipline/practice and help to demonstrate what it means to be a Kaiser Permanente nurse. The values that inform our work are Professionalism, Excellence, Compassion, Teamwork, Patient and Family Centric, and Integrity. Our practice and the work of nursing are supported by four key pillars: Quality and Safety, Leadership, Professional Development, and Research and Evidence-Based Practice, and in turn create environments that are caring, healing, and collaborative. This infrastructure establishes practices, processes, and systems through which our vision is achieved. It lays the foundation that makes transformational practice possible and aligns nursing with Kaiser Permanente’s mission and vision.

What is a Nursing Professional Practice Model?
A professional practice model provides a unifying framework for what Kaiser Permanente nurses believe about nursing practice. It is a guide that directs and describes how we practice by identifying key elements of professional nursing practice that can be found in all we do.
APPENDIX C

Mobile Learning App and Toolkit Proof of Concept

Healthcare Virtual Reality Simulation

Cultivating a Culture of Compassion for Physicians, Nurses and Caregivers

A virtual reality storytelling mobile application project.
## APPENDIX D

### John Hopkins Nursing Evidence-Based Practice Research Appraisal Tool

<table>
<thead>
<tr>
<th>Author/Year</th>
<th>Study Objectives</th>
<th>Level/Design/Subjects</th>
<th>Interventions/Outcomes &amp; Measures</th>
<th>Results</th>
<th>Study Limitations</th>
<th>Implications/Relevance to Practice</th>
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<tbody>
<tr>
<td>Marshburn, D., Engelke, M., &amp; Swanson, M. (2009).</td>
<td>The reason for this study was to examine the relationship between new nurses’ performance-based measurements and perceptions of clinical competence. The Casey-Fink Graduate Nurse Experience Survey (1990) was used to as measurement Performance Based Development System by Del Bueno (1990) was used to measure performance.</td>
<td>Level: III Design: Description correlational design were used Quality: A Subjects: N = 265 Newly graduated nurses</td>
<td>Interventions: Retrospective Study Outcome Measurement: The Casey-Fink Graduate Nurse Experience Survey and Performance Based Development System were used to analyzed the data collected by the organization between 2004-2006.</td>
<td>There was a positive relationship between new nurses’ perceptions of clinical competence and a performance-based measures of clinical competence. Gaps in new nurses’ perception and actual performance could lead to patient safety issues.</td>
<td>All nurses worked at the same academic medical center. Study needs to be repeated across institutions to enhance generalizability.</td>
<td>Findings from this study mirrored other studies. Experience does have a positive effect on the new nurse’s preparation for practice. As new nurses become more self-confident and comfortable with their skills, they are more likely to be successful in their performance. Educators and leaders must have an understanding of the relationship between new nurses’ perception and performance based clinical competence.</td>
</tr>
<tr>
<td>Author/Year</td>
<td>Study Objectives</td>
<td>Level/Design/Subjects</td>
<td>Interventions Outcomes &amp; Measures</td>
<td>Results</td>
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| Kowalski, S., & Cross, C. (2010). Preliminary outcomes of a local residency program for new graduate registered nurses, *Journal of Nursing Management*, 18, 96-104. | The authors studied newly graduated nurses participating in a year-long local residency program at two hospitals in Las Vegas, NV. | Level: IV  
Design: Descriptive Correlational Study  
Subjects: N = 51  
A combination of both ADN and BSN newly graduated nurses were studied during a one year program between 2007-2008. | Interventions:  
Clinical competencies, anxiety, stress, professional transition and retention were measured on 55 nurse residents  
Outcome Measurement:  
Several tools were used for measurements: Preceptor Evaluation of Resident Tool (2007), Pagana’s Clinical Stress Questionnaire (1989), and Spielberger’s State-Trait Anxiety Inventory for Adults (1983), and the Casey-Fink Graduate Nurse Experience Survey were used.  
Pre- and Post-survey analysis with distribution and p-values were used primary to analyze the data. And Wilcoxon’s signed-rank test was used to compare pre- to post-scores for two samples. | Findings suggested an improvement in clinical competency, a decreased sense of threat, and improved communication and leadership skills.  
New graduates do not feel skilled, comfortable, or confident for as long as one year after being hired.  
Perceptions of support from the nursing staff, preceptors and managers increased during the residency program.  
Resident’s level of professional satisfaction did not improve despite the year-long program. | Relatively small sample size within one geographic area in the United States. | This study demonstrated the effectiveness and impact of a one year long nurse residency program.  
Nurse residency program can support newly graduated nurses and decrease replacement costs and high turnover.  
The role of the educators and preceptors are vital to the success of the nurse residents. |
<table>
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<tr>
<th>Author/Year</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Goode, C., Lynn, M., McElroy, D., Bednash, G., &amp; Murray (2013). Lessons learned from 10 years of research on a post-baccalaureate nurse residency program. The Journal of Nursing Administration, 00(0), 1-8.</td>
<td>This study looked at 10 years of research on a post-baccalaureate new graduate nurse residency program and to report lesson learned.</td>
<td>Level: II Design: Data from new graduate residents participated in the UNC/AACN nurse residency program between 2002-2012 Quality: A Subjects: N = 1,016 Participants of the UNC/AACN programs</td>
<td>Interventions: UNC/AACN One-year Nurse Residency Program Outcome Measurement: Casey-Fink Graduate Nurse Experience Scale and retention rates of the nurse residency. Data were collected online from the residents completing the survey at the start, 6 months, and one year after hiring. Q1. How did the residents change across the program? Q2. What was the retention rate of the residents?</td>
<td>The study results indicated a high retention rates for new graduates in the residency program. Residents’ preceptor of their ability to organize and prioritize their work, communicate, clinical practice, and leadership showed statistically significant increases over the one year program. The residency focused on quality, safety, and EBP has enriched.</td>
<td>Willingness of residents to participate in data collection is difficult for a variety of reasons. All participation was voluntary. Participants are all from the same nurse residency program.</td>
<td>Leadership and Academic/Service partnership is vital to the success of the program and the residents. Accredited one-year long nurse residency programs run by hospitals or schools are the standard.</td>
</tr>
<tr>
<td>Beyea, S. C., Slattery, M.J., &amp; von Reyn, L. (2010). Outcomes of a Simulation-Based Nurse Residency Program. Clinical Simulation in Nursing, 6(5), e169-e175.</td>
<td>This study identified the use of human patient simulators as a consistent, replicable orientation process for the newly graduated nurses during a transition to practice nurse residency program.</td>
<td>Level: III Design: Descriptive Correlational Study Quality: B Subjects: N = 260 Participants over 2 years (17 cohorts)</td>
<td>Interventions: By using human patient simulation scenarios and integrating specific themes (e.g. professionalism, communication, teamwork, situational awareness) during the nurse residency program. Outcome Measurement: Instruments were used to measure competency, confidence, and readiness for practice. Data were collected during week 1, 6, and 12. Feedback were obtained after each simulation sessions.</td>
<td>Participants reported an increased in self-efficacy, confidence, and job satisfaction. A significant turnover avoidance of $3,542,000 during the first 3 years of the program sited by the authors.</td>
<td>A combination of medical, surgical, and specialty areas’ newly employed nurses were accessed. Various length of the programs (21-42 weeks). Single site program.</td>
<td>These findings helped hospitals to identify gaps in the knowledge and abilities of recent graduates and the use of human patient simulation to enhance the quality and safety of patient care. The study provides valuable lessons for educators, leaders, and researchers.</td>
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<tr>
<td>Author/Year</td>
<td>Study Objectives</td>
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<td>Waugh, A., Donaldson, J. (2016).</td>
<td>This study explored the learning that occurred from listening to narratives of compassionate care, and to identify students’ preferred story formats and other potential uses of such stories.</td>
<td>Level: III  Design: Descriptive correlational with Qualitative and Quantitative  Quality: B  Subjects: N = 13  A convenient sample of 13 undergraduate nursing students</td>
<td>Interventions:  Digital narratives were created based on 4 patient stories from students’ essays.  <strong>Outcome Measurement</strong>:  Questionnaire and interviews  Several themes were reported  - Learning from the stories  - Person-Centerness  - Compassion/Empathy  Effective mentor support</td>
<td>Students found the narratives effective in learning about reflection and caring behaviors.  Students suggested these stories would be also useful for the mentors and preceptors. Students reported that they are more prepared for the placement (licensure) exam.</td>
<td>Small Sample size and unique interventions.  Further studies are needed to be able to generalize findings.</td>
<td>The use of digital medias (audio or video) can promote effective reflective thinking and enhance compassionate care amongst the nursing students.</td>
</tr>
<tr>
<td>Chaffin, A. J., &amp; Adams, C. (2013, August).</td>
<td>A mixed method study was used to gather data on nursing students’ self-rated empathy pre- and post-simulation. The study objective is to determine whether student’s empathy increased after a simulation that used an innovative learning tool.</td>
<td>Level: III  Design: A mixed method design to collect quantitative and qualitative data  Quality: B  Subject: N = 67  A convenient sample of mental health nursing students was recruited for the study.</td>
<td>Interventions:  The Hearing Voices Simulation, designed by Deegan (2006) was used with a person diagnosed with schizophrenia. A 45-minutes audio recording and material were used to identify if it changes students’ self-rated level of empathy.  <strong>Outcome Measurement</strong>:  Self-rated tools on students’ level of empathy pre- and post intervention with written reflections and debriefings were collected.</td>
<td>The quantitative results supported a positive impact of the simulation.  Written reflections and debriefing suggested a strong correlation of the impact on learning and future practice.  Participants were engaged in deep emotional discussion about the sadness they felt for patients who could not turn off the voices and feelings.</td>
<td>A small convenient sample size.  Only BSN students were included in the study.  Sample is primarily young women.  The use of a self-rated scale.</td>
<td>The use of innovative simulation and other technological methodologies can enhance the learners experience and self-confidence.  The use of self-reflection and debriefing can impact the learning outcomes of students and newly graduated nurses alike.</td>
</tr>
<tr>
<td>Author/Year</td>
<td>Study Objectives</td>
<td>Level/Design/Subjects</td>
<td>Interventions Outcomes &amp; Measures</td>
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<td>Laurie, J., &amp;</td>
<td>Little is known about how the experience and outcomes of the use of digital mental wellbeing interventions by the public.</td>
<td>Level: III</td>
<td>Interventions:</td>
<td>Findings of the study and the effective uses of the mobile platform are as follow:</td>
<td>Small sample size limited to the use of one mobile app – Headspace.</td>
<td>Behavioral changes technologies need to work with people’s lifestyles, values, and expectations.</td>
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<tr>
<td>Blandford, A.</td>
<td>This study sought to understand how users adopt and experience a mobile-based mindfulness interventions.</td>
<td>Design: A qualitative semi-structured interview study</td>
<td>To understand the user experience of the mindfulness app (Headspace), an autographic (a method where the researcher becomes a participant in order to enter into an empathic, relationship with users) and semi-structured interviews were used.</td>
<td>Mobile wellbeing interventions should include:</td>
<td>An auto-ethnographic study design conducted by the author over a 30 days period in the UK.</td>
<td>Mobile mindfulness application can be effective for healthcare providers like nurses, but future research and design should explore ways to encourage users to reflect on how to make time and space, manage expectations about outcomes, and make digital health interventions more usable and engaging.</td>
</tr>
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<td>(2016). Making</td>
<td></td>
<td>Quality: B</td>
<td>Users’ experience and behavioral changes were collected in multiple interviews by the author.</td>
<td></td>
<td>Participants’ experience during the study were not sampled.</td>
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<td>time for mindfulness, International Journal of Medical Informatics, 1-13.</td>
<td></td>
<td>Subjects: N = 16</td>
<td>Outcome Measurement: Enabling factors include: positive attitude towards mobile application platform, mindfulness practice, and social influence.</td>
<td>Most participants stopped using the mobile app routinely.</td>
<td>All participants are healthy and did not report any mental health problems.</td>
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<td></td>
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<td>Participants aged</td>
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<td>25-38 were interviewed after using the mobile app.</td>
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<td>Daily journal were collected and thematic analysis was conducted.</td>
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<td>Data were collected and analyzed using the Reasoned Action Approach.</td>
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At the heart of the **Kaiser Permanente Nursing Professional Practice Model** is the patient and family. The nurse-patient/family relationship is the cornerstone of nursing practice and leverages the powerful role human relationships play in creating caring and healing environments. It honors the unity of the whole human being – mind, body, spirit – and is the lens through which Kaiser Permanente nurses look to ensure that they meet the needs of the patient and families. Six nursing values are embedded in our discipline/practice and help to demonstrate what it means to be a Kaiser Permanente nurse. The values that underpin our work are: **Professionalism, Patient and Family Centric, Compassion, Teamwork, Excellence, and Integrity**. Our practice and the work of nursing are organized by four key pillars: Quality and Safety, Leadership, Professional Development, and Research/Evidence-Based Practice. This infrastructure establishes practices, processes, and systems through which our vision is achieved. It lays the foundation that makes care transformational practice possible and aligns nursing with Kaiser Permanente’s mission.
APPENDIX F

Jean Watson’s Caring Model

Core Concepts of Jean Watson’s Theory of Human Caring/Caring Science

The Core Principles/Practices: Evolving From Carative to Caritas (Watson, 2008, p. 34)

- Practice of loving-kindness and equanimity
- Authentic presence: enabling deep belief of other (patient, colleague, family, etc.)
- Cultivation of one’s own spiritual practice toward wholeness of mind/body/spirit—beyond ego
- "Being" the caring-healing environment
- Allowing miracles (openness to the unexpected and inexplicable life events)

Core Concepts of the Theory:

- **A relational caring for self and others** based on a moral/ethical/philosophical foundation of love and values

- **Transpersonal caring relationship** (going beyond ego to higher “spiritual” caring created by “Caring Moments”)
  - Moral commitment to protect and enhance human dignity
  - Respect/"love" for the person—honoring his/her needs, wishes, routines, and rituals
  - Caring Consciousness of self as person/nurse and other as person—connection as human beings
  - Heart-centered/healing caring based on practicing and honoring wholeness of mind/body/spirit in self and each other
  - Inner harmony (equanimity)—maintaining balance
  - Intention of “doing” for another and “being” with another who is in need (What skills you do and how caring conscious intention you do it.)
  - "Authentic Presence" (honoring/connecting human to human)

- **Caring Occasion/Caring Moment:** Heart-centered Encounters with another person
  When two people, each with their own "phenomenal field"/background come together in a human-to-human transaction that is meaningful, authentic, intentional, honoring the person, and sharing human experience that expands each person’s worldview and spirit leading to new discovery of self and other and new life possibilities.

- **Multiple ways of knowing** (through science, art, aesthetic, ethical, intuitive, personal, cultural, spiritual)

  - Understanding self through reflection/meditation (journaling, the arts, meditation, etc.)
    - What is the meaning of caring for the person/families/myself?
    - How do I express my caring consciousness and commitment to my patients/clients? To colleagues? To the institution? To the community and larger world?
    - How do I define self, nurse, person, environment, health/healing, and nursing?
    - How do I make a difference in people’s life and suffering?
    - How do I I increase the quality of people’s healing and dying process?
    - How can I be informed by the clinical caritas processes in my practice?
    - How can I be inspired by Watson’s caring theory in my practice?
APPENDIX G

Mezirow’s Transformative Learning and Critical Reflection Theories

Mezirow (1977)

One learner unexpectedly broke down in the middle of a training session. Trainer asked her to take a moment outside.

Mezirow’s Critical Reflection
(after Mezirow, 1990)
APPENDIX H

Kolb’s Experiential Learning Cycle

Kolb’s Model for the Learning Cycle

What impact does this newly achieved Learning Outcome now have on your future learning? (4)

(3) How would you conceptualise your thoughts?

Or: How do you identify a Learning Outcome and what do you call it?

(1) An experience you have made regarding your learning?

(2) What have you thought about this experience and its relation to your learning?

Source: based on Kolb 1984
APPENDIX I

Mindful Experiential Learning Practice Guide

MINDFUL PRACTICES

CONCRETE EXPERIENCE
- Diaphragm breathing—relaxing the physiological state
- Focus on a new touch, sound, sight, smell, so your mind re-set and switches off autopilot

REFLECTIVE OBSERVATION
- Become aware of critical times that you are impulsive
- Suspend impulsive thoughts and actions
- Practice sitting with thoughts and feelings rather than acting on them
- Practice acceptance rather than judgement

ABSTRACT CONCEPTUALIZATION
- Question assumptions you are making in this moment
- Consider other people’s perspectives
- Doubt your personal “truth”
- Seek shades of gray rather than dichotomous thinking

ACTIVE EXPERIMENTATION
- Practice novel questioning—shift the conversation by asking questions that generate possibilities
- Think of thoughts and behaviors that you admire in another during a given situation and practice them
- Experiment by responding to people and events in ways that you normally do not
APPENDIX J

University of San Francisco DNP Practice Project Determination Form

DNP Statement of Non-Research Determination Form

Student Name: Benson K. L. Yeung

Title of Project:

Cultivating a Culture of Compassion

An Evidence Based Toolkit to Enhance Caring Science and Practice

Brief Description of Project:

This ELDNP project is designed to inform and guide executive nurse leaders, health science researchers and professional practice advocates on the implementation and evaluation of a compassionate care transition to practice nurse residency program. An evidenced-based comprehensive curriculum and a practical training toolkit will be developed for the newly licensed registered nurses to further enhance their quality of care and to ensure meaningful safe practices in the clinical setting.

A) Aim Statement:

The aim of this project is to incorporate state of the art virtual reality simulations and immersive technologies to harness greater human caring potential and a higher level of compassionate patient care among novice nurses. The overarching goal of the program is to help nurture a generation of greatly skilled and compassionate clinical nurse leaders for the organization and the community it serves.

B) Description of Intervention:

Several innovative educational and behavioral initiatives to enhance compassionate care including but not limited to virtual simulations, 360-degree video case scenarios, peer supported reflective journals, and mobile phone applications to facilitate the practice of compassionate patient care will be designed and piloted in a large regional nurse residency program in Southern California. Critical elements from the NCSBN Transition to Practice Model, QSEN, and TeamSTEPPs will be integrated as the core framework and guiding principles for this project.
C) How will this intervention change practice?

Current use of high-fidelity patient simulation scenarios and large classroom discussions may enhance newly graduated nurses’ critical think skills and make sound clinical decision effectively. However, the lack of demonstration and communication of caring and patient engagement with compassion is evidence among novice nurses. This ELDNP project will provide additional knowledge and practical strategies to minimize the transition to practice gap through the model of compassionate care as well as improving emotional intelligence among newly graduated nurses. Traditional face-to-face, didactic style of information gathering and sharing may not be able to delivery effective learning nor the best use of resources among the next generation of nurses. Nurse leaders and educators must continue to explore new and effective ways to lead tomorrow’s healthcare providers.

D) Outcome measurements:

The Casey-Fink Graduate Nurse Experience Survey, the McCloskey-Mueller Satisfaction Scale (MMSS), and the Professional Quality of Life Scale (ProQOL) Version 5 will be use to assess the outcome of the project.

"Compassion is not something that can be measured, but something to be felt and used in practice."

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.

☐ This project involves research with human subjects and must be submitted for IRB approval before project activity can commence.

Comments:
CULTIVATING A CULTURE OF COMPASSION

EVIDENCE-BASED CHANGE OF PRACTICE PROJECT CHECKLIST *

Instructions: Answer YES or NO to each of the following statements:

<table>
<thead>
<tr>
<th>Project Title:</th>
<th>YES</th>
<th>NO</th>
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<tbody>
<tr>
<td>The aim of the project is to improve the process or delivery of care with established/accepted standards, or to implement evidence-based change. There is no intention of using the data for research purposes.</td>
<td>X</td>
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<tr>
<td>The specific aim is to improve performance on a specific service or program and is a part of usual care. ALL participants will receive standard of care.</td>
<td>X</td>
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<tr>
<td>The project is NOT designed to follow a research design, e.g., hypothesis testing or group comparison, randomization, control groups, prospective comparison groups, cross-sectional, case control. The project does NOT follow a protocol that overrides clinical decision-making.</td>
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<td>The project involves implementation of established and tested quality standards and/or systematic monitoring, assessment or evaluation of the organization to ensure that existing quality standards are being met. The project does NOT develop paradigms or untested methods or new untested standards.</td>
<td>X</td>
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<tr>
<td>The project involves implementation of care practices and interventions that are consensus-based or evidence-based. The project does NOT seek to test an intervention that is beyond current science and experience.</td>
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<td>The project is conducted by staff where the project will take place and involves staff who are working at an agency that has an agreement with USF SONHP.</td>
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<tr>
<td>The project has NO funding from federal agencies or research-focused organizations and is not receiving funding for implementation research.</td>
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<td>X</td>
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<tr>
<td>The agency or clinical practice unit agrees that this is a project that will be implemented to improve the process or delivery of care, i.e., not a personal research project that is dependent upon the voluntary participation of colleagues, students and/ or patients.</td>
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<tr>
<td>If there is an intent to, or possibility of publishing your work, you and supervising faculty and the agency oversight committee are comfortable with the following statement in your methods section: “This project was undertaken as an Evidence-based change of practice project at X hospital or agency and as such was not formally supervised by the Institutional Review Board.”</td>
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**ANSWER KEY:** If the answer to ALL of these items is yes, the project can be considered an Evidence-based activity that does NOT meet the definition of research. **IRB review is not required. Keep a copy of this checklist in your files.** If the answer to ANY of these questions is NO, you must submit for IRB approval.

*Adapted with permission of Elizabeth L. Hohmann, MD, Director and Chair, Partners Human Research Committee, Partners Health System, Boston, MA.*
APPENDIX K

PDSA Cycle of the purposed QI Project

- Plan
  - Determine participants (N=29)
  - Identify goals (practice change)
  - Define plan (bridging NG gap)
  - Conduct literature review
  - Draft data collection plan
  - Find measurement tools

- Do
  - Develop & pilot mobile app
  - Pilot toolkit materials
  - Casey Fink & Self-Compassion Tool, Debriefing Experience
  - Scale & program evaluation

- Act
  - Implement mobile app
  - Implement toolkits
  - Collect data and analysis results
  - Disseminate findings via poster

- Study
  - Monitor app/toolkit usages
  - Evaluate app effectiveness
  - Assess validity of materials
  - Obtain feedback from team
Cultivating a Culture of Caring and Compassion Among Newly Graduated Registered Nurses: An Evidence Based Transition to Practice Toolkit

Benson K. Yeung
Professional Development and Education Consultant, KP SCAL Patient Care Services

Kaiser Permanente SCAL Regional Patient Care Services Poster Presentation May, 2017

APPENDIX L

KAISER PERMANENTE NURSING VISION

Extraordinary Nursing Care
Every Patient
Every Time

The Kaiser Permanente registered nurse’s role is based on KPN’s nursing model, vision, and values. It combines the art and science of nursing with the goal of helping individuals and their communities to attain, maintain, and restore health whenever possible. The art of nursing is based on a framework of human dignity, comfort, and caring through relationships. The science of nursing utilizes critical thinking, evidenced-based education/research, and successful practices in caring for patients and communities throughout the health care continuum. Through a collaborative practice environment, the registered nurse connects to and establishes a therapeutic patient-centered relationship with the patient, family and other members of the health care team. Nurses embrace and advocate for the patient and family in a patient-centered, holistic manner to include healing, spirituality, empathy, and compassion. The KPN nursing values of teamwork, professionalism, compassion, excellence, integrity and patient- and family-centered care are evident in our health care delivery. Kaiser Permanente nurses advance the art and science of nursing in a patient-centered healing environment through our professional practice and leadership.

Aligning Healthcare Safety, Quality and KP Nursing Values Crosswalk

<table>
<thead>
<tr>
<th>QSEN Standards</th>
<th>Magnet® Standards</th>
<th>The Joint Commission Standards</th>
<th>Kaiser Permanent Nursing Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient-Centered Care</td>
<td>Core Professional Practice/Environment</td>
<td>Leadership, Performance Improvement, and Improvement</td>
<td>Patient and Family-Centered Care, Promoting the essential role of the patient and family in all aspects of their care.</td>
</tr>
<tr>
<td>Teamwork and Collaboration</td>
<td>Core Professional Practice/Environment</td>
<td>Leadership, Performance Improvement, and Improvement</td>
<td>Teamwork</td>
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<tr>
<td>Evidence-Based Practice</td>
<td>Core Professional Practice/Environment</td>
<td>Leadership, Performance Improvement, and Improvement</td>
<td>Evidence-Based Practice</td>
</tr>
<tr>
<td>Quality Improvement</td>
<td>Core Professional Practice/Environment</td>
<td>Leadership, Performance Improvement, and Improvement</td>
<td>Quality Improvement</td>
</tr>
<tr>
<td>Safety</td>
<td>Core Professional Practice/Environment</td>
<td>Leadership, Performance Improvement, and Improvement</td>
<td>Safety</td>
</tr>
<tr>
<td>Information</td>
<td>Core Professional Practice/Environment</td>
<td>Leadership, Performance Improvement, and Improvement</td>
<td>Information Management/Account for Care and Services</td>
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</table>

- PANTRY: Safety and Quality: Compassionate, Quality & Safety Education for Nurses (QSEN); KP Voice of Nursing, The Joint Commission, and American Nurses Credentialing Center (ANCC) Magnet® Standards for Nursing and Medical Services (QSEN), Extraordinary Nursing Care, Every Patient, Every Time (QSEN) (2011).
- CAM: 4 Cs of the Nurse: Compassion, Caring, Commitment, Competence (Dillman et al., 2012).
APPENDIX M

Screenshots of Mobile App

Kaiser Permanente evolved from industrial health care programs for construction, shipyard, and steel mill workers for the Kaiser industrial companies during the late 1930s and 1940s.

The organization that is now Kaiser Permanente began at the height of the Great Depression with a single inventive young surgeon and a 12-bed hospital in the middle of the Mojave Desert. When Sidney Garfield, MD, looked at the thousands of men involved in building the Colorado River Aqueduct Project, he saw an opportunity. He borrowed money to build Contractors General Hospital; six miles from a tiny town called Desert.
APPENDIX N

Mindfulness Toolkit

What’s in the Toolkit?

In training in BASIC MINDFULNESS we learn to identify and improve basic mental skills such as...

- Mindfulness
- Concentration
- Alertness
- Attention
- Intention

The MINDFULNESS TOOLKIT equips us with the basic tools we need to manage our emotions and bring our thoughts and feelings under control. It is the basis of the classes offered by KMC London.

Classes using the Mindfulness Toolkit are arranged in two parts:

» 1 Training in basic mindfulness
  Meditation techniques to improve our mindfulness and other mental tools

» 2 Training in applied mindfulness
  Learning to apply these tools in and out of meditation to solve our daily problems

Retrieved from
http://www.kmclondon.org/mindfulne
Dr. Christine Tanner's Integrative Model of Clinical Judgment

Tanner, C.A. (2007) Thinking Like a Nurse: a research based model of clinical judgment. *Journal of Nursing Education, 45*(6), 204-211.
APPENDIX P

Video Storytelling Toolkit

What does caring and compassion look and feel like?

“Mobile virtual reality programs are changing the way healthcare providers are trained, practiced, and cared for their patients”

Fortune Magazine

Virtual Reality Simulation offers you the opportunity to see the world through the eyes of patients and families. You are experientially stepping inside a moment, a place, a community other than your own. With the development of new hardware & software, mobile VR technology applications are now more affordable and accessible in academic, hospitals, and healthcare settings.

Designed for physicians, nurses & caregivers

“VR technology enables us to create powerful, immersive experiences so clinicians and caregivers can learn to understand and empathize complex patient and family situations anywhere, anytime”

Benson Yeung, CEO, VRS Inc.

Explore
- Cultures
- Religions
- Disease States
- Community Needs
- Global Issues
- Environmental Concerns

Experience
- Family Dynamics
- Hospitalizations
- Diagnostic Procedures
- Empathy & Compassion
- Admissions & Discharges
- End of Life Care & Support

Excel
- Customer Service
- Quality of Care
- HCAHPS Score
- Magnet Recognition
- Center of Excellence

Download Mobile App (iOS, Google)
Visit us at www.vrscares.org
APPENDIX Q

SWOT Analysis
Use of Mobile Education Application

Strengths
- Promote workforce development
- Service the community needs
- Strengthen Academic Partnership
- Elevate Teamwork/Collaboration
- Create Dedicated Education Unit
- Leadership succession
- Research opportunities
- Staff development and growth
- Provide high quality of care

Weaknesses
- Increase staffing demands
- Need management support
- Complex on-boarding process
- Add to current HR workflow
- Frequent orientation scheduling
- Unfamiliar academic partners

Opportunities
- Best evidence-based practices
- Partner with community leaders
- Elevate patient care and services
- Improve branding and marketing
- Promote educational innovations
- Support professional growth
- Achieve Magnet recognition/status

Threats
- Programs with no accreditation
- Unsafe students/practices
- Substandard quality of care
- Faculty experience varies
- Potential financial impact
- May increase enterprise risks
- Market supply and demand
- Unpredictable Service delivery
APPENDIX R
Critical Milestone
Gantt Chart

Cultivating a Culture of Compassion Among Novice Nurses
An Innovative Simulation Toolkit

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<tbody>
<tr>
<td>Develop initial Concept/Idea</td>
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<td>Gap / SWOT Analysis</td>
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<td>USF IRB approval</td>
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<td>Budget Planning</td>
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<td>Identify Mobile App Vendor</td>
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<td>Develop Mobile Application</td>
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<tr>
<td>Review and revise content</td>
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<td>Evaluate Mobile application</td>
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<td>Data Collection (Cohort 2)</td>
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<td>Project Completion</td>
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<td>Project Presentation</td>
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</tbody>
</table>
APPENDIX S

Casey-Fink Graduate Nurse Experience Survey

Casey Fink Graduate Nurse Experience Survey (revised)
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I. List the top three skills/procedures you are uncomfortable performing independently at this time? (please select from the drop down list) list is at the end of this document.

1. ____________________________
2. ____________________________
3. ____________________________
4. ______ I am independent in all skills

II. Please answer each of the following questions by placing a mark inside the circles:

<table>
<thead>
<tr>
<th>Question</th>
<th>STRONGLY DISAGREE</th>
<th>DISAGREE</th>
<th>AGREE</th>
<th>STRONGLY AGREE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I feel confident communicating with physicians.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>2. I am comfortable knowing what to do for a dying patient.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>3. I feel comfortable delegating tasks to the Nursing Assistant.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>4. I feel at ease asking for help from other RNs on the unit.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>5. I am having difficulty prioritizing patient care needs.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>6. I feel my preceptor provides encouragement and feedback about my work.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>7. I feel staff is available to me during new situations and procedures.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>8. I feel overwhelmed by my patient care responsibilities and workload.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>9. I feel supported by the nurses on my unit.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>10. I have opportunities to practice skills and procedures more than once.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>11. I feel comfortable communicating with patients and their families.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
### Casey-Fink Graduate Nurse Experience Survey

<table>
<thead>
<tr>
<th></th>
<th>STRONGLY DISAGREE</th>
<th>DISAGREE</th>
<th>AGREE</th>
<th>STRONGLY AGREE</th>
</tr>
</thead>
<tbody>
<tr>
<td>12. I am able to complete my patient care assignment on time.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>13. I feel the expectations of me in this job are realistic.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>14. I feel prepared to complete my job responsibilities.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>15. I feel comfortable making suggestions for changes to the nursing plan of care.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>16. I am having difficulty organizing patient care needs.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>17. I feel I may harm a patient due to my lack of knowledge and experience.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>18. There are positive role models for me to observe on my unit.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>19. My preceptor is helping me to develop confidence in my practice.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>20. I am supported by my family/friends.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>21. I am satisfied with my chosen nursing specialty.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>22. I feel my work is exciting and challenging.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>23. I feel my manager provides encouragement and feedback about my work.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>24. I am experiencing stress in my personal life.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>25. If you chose agree or strongly agree to #24, please indicate what is causing your stress. (You may circle more than once choice.)</td>
<td>a. Finances</td>
<td>b. Child care</td>
<td>c. Student loans</td>
<td>d. Living situation</td>
</tr>
</tbody>
</table>
III. How satisfied are you with the following aspects of your job:

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Very Dissatisfied</th>
<th>Moderately Dissatisfied</th>
<th>Neither Satisfied</th>
<th>Moderately Satisfied</th>
<th>Very Satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salary</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
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<tr>
<td>Vacation</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
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<tr>
<td>Benefits package</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Hours that you work</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
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<tr>
<td>Weekends off per month</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
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<tr>
<td>Your amount of responsibility</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Opportunities for career advancement</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Amount of encouragement and feedback</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Opportunity for choosing shifts worked</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

IV. Transition (please circle any or all that apply)

1. What difficulties, if any, are you currently experiencing with the transition from the "student" role to the "RN" role?
   a. role expectations (e.g., autonomy, more responsibility, being a preceptor or in charge)
   b. lack of confidence (e.g., MD/PT communication skills, delegation, knowledge deficit, critical thinking)
   c. workload (e.g., organizing, prioritizing, feeling overwhelmed, ratios, patient acuity)
   d. fears (e.g., patient safety)
   e. orientation issues (e.g., unit familiarization, learning technology, relationship with multiple preceptors, information overload)

2. What could be done to help you feel more supported or integrated into the unit?
   a. improved orientation (e.g., preceptor support and consistency, orientation extension, unit specific skills practice)
   b. increased support (e.g., manager, RN, and educator feedback and support, mentorship)
   c. unit socialization (e.g., being introduced to staff and MDs, opportunities for staff socialization)
   d. improved work environment (e.g., gradual ratio changes, more assistance from unlicensed personnel, involvement in schedule and committee work)

3. What aspects of your work environment are most satisfying?
   a. peer support (e.g., belonging, team approach, helpful and friendly staff)
   b. patients and families (e.g., making a difference, positive feedback, patient satisfaction, patient interaction)
Casey-Fink Graduate Nurse Experience Survey

4. What aspects of your work environment are least satisfying?
   a. nursing work environment (e.g. unrealistic ratios, tough schedule, futility of care)
   b. system (e.g. outdated facilities and equipment, small workspace, charting, paperwork)
   c. interpersonal relationships (e.g. gossip, lack of recognition, lack of teamwork, politics)
   d. orientation (inconsistent preceptors, lack of feedback)

5. Please share any comments or concerns you have about your residency program:

V. Demographics: Circle the response that represents the most accurate description of your individual professional profile.

1. Age: _______ years

2. Gender:
   a. Female
   b. Male

3. Ethnicity:
   a. Caucasian (white)
   b. Black
   c. Hispanic
   d. Asian
   e. Other
   f. I do not wish to include this information

4. Area of specialty:
   a. Adult Medical/Surgical
   b. Adult Critical Care
   c. OB/Post Partum
   d. NICU
   e. Pediatrics
   f. Emergency Department
   g. Oncology
   h. Transplant
   i. Rehabilitation
   j. OR/PACU
   k. Psychiatry
   l. Ambulatory Clinic
   m. Other: ____________________________
Casey-Fink Graduate Nurse Experience Survey

5. School of Nursing Attended (name, city, state located): __________________________

6. Date of Graduation: __________________________

7. Degree Received: AD: _______ Diploma: _______ BSN: _______ ND: _______

8. Other Non-Nursing Degree (if applicable): __________________________

9. Date of Hire (as a Graduate Nurse): __________________________

10. What previous health care work experience have you had:
    a. Volunteer
    b. Nursing Assistant
    c. Medical Assistant
    d. Unit Secretary
    e. EMT
    f. Student Externship
    g. Other (please specify): __________________________

11. Have you functioned as a charge nurse?
    a. Yes
    b. No

12. Have you functioned as a preceptor?
    a. Yes
    b. No

13. What is your scheduled work pattern?
    a. Straight days
    b. Straight evenings
    c. Straight nights
    d. Rotating days/evenings
    e. Rotating days/nights
    f. Other (please specify): __________________________

14. How long was your unit orientation?
    a. Still ongoing
    b. ≤ 8 weeks
    c. 9 – 12 weeks
    d. 13 – 16 weeks
    e. 17 – 23 weeks
    f. ≥ 24 weeks

15. How many primary preceptors have you had during your orientation?
    ________ number of preceptors

16. Today’s date: __________________________
Casey-Fink Graduate Nurse Experience Survey

Drop down list of skills

Assessment skills
Bladder catheter insertion/irrigation
Blood draw/venipuncture
Blood product administration/transfusion
Central line care (dressing change, blood draws, discontinuing)
Charting/documentation
Chest tube care (placement, pleurovac)
Code/Emergency Response
Death/Dying/End-of-Life Care
Nasogastric tube management
ECG/EKG/Telemetry care
Intravenous (IV) medication administration/pumps/PACAs
Intravenous (IV) starts
Medication administration
MD communication
Patient/family communication and teaching
Prioritization/time management
Tracheostomy care
Vent care/management
Wound care/dressing change/wound vac
Unit specific skills ____________________________
### Self-Compassion Scale (SCS)

**HOW I TYPICALLY ACT TOWARDS MYSELF IN DIFFICULT TIMES**

Please read each statement carefully before answering. To the left of each item, indicate how often you behave in the stated manner, using the following scale:

<table>
<thead>
<tr>
<th>Almost never</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Almost always</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

1. I'm disapproving and judgmental about my own flaws and inadequacies.

2. When I'm feeling down I tend to obsess and fixate on everything that's wrong.

3. When things are going badly for me, I see the difficulties as part of life that everyone goes through.

4. When I think about my inadequacies, it tends to make me feel more separate and cut off from the rest of the world.

5. I try to be loving towards myself when I'm feeling emotional pain.

6. When I fail at something important to me I become consumed by feelings of inadequacy.

7. When I'm down and out, I remind myself that there are lots of other people in the world feeling like I am.

8. When times are really difficult, I tend to be tough on myself.

9. When something upsets me I try to keep my emotions in balance.

10. When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.

11. I'm intolerant and impatient towards those aspects of my personality I don't like.

12. When I'm going through a very hard time, I give myself the caring and tenderness I need.

13. When I'm feeling down, I tend to feel like most other people are probably happier than I am.

14. When something painful happens I try to take a balanced view of the situation.

15. I try to see my failings as part of the human condition.

16. When I see aspects of myself that I don't like, I get down on myself.

17. When I fail at something important to me I try to keep things in perspective.
Self-Compassion Scale (SCS)

18. When I’m really struggling, I tend to feel like other people must be having an easier time of it.
19. I’m kind to myself when I’m experiencing suffering.
20. When something upsets me I get carried away with my feelings.
21. I can be a bit cold-hearted towards myself when I’m experiencing suffering.
22. When I’m feeling down I try to approach my feelings with curiosity and openness.
23. I’m tolerant of my own flaws and inadequacies.
24. When something painful happens I tend to blow the incident out of proportion.
25. When I fail at something that’s important to me, I tend to feel alone in my failure.
26. I try to be understanding and patient towards those aspects of my personality I don’t like.
APPENDIX U

Debriefing Experience Scale Developed by Dr. Shelly J. Reed (Brigham Young University)

Debriefing Experience Scale

Little is known about participants’ experience during debriefing following simulation. You can add to professional knowledge by giving your opinions. Please complete the survey below. Your views are very valuable. There is no right or wrong answer.

Your debriefing type(s)—Mark(x) all that apply:

- Discussion without videotape
- Discussion with videotape
- Journaling
- Blogging
- Other (Specify)

Circle the number below that best reflects your opinion about your debriefing experience. Rate each experience item based upon how important it is to you:

1 – Strongly disagree with the statement
2 – Disagree with the statement
3 – Undecided – you neither agree or disagree with the statement
4 – Agree with the statement
5 – Strongly agree with the statement
NA—Not Applicable; the statement does not pertain to the debriefing activity performed

<table>
<thead>
<tr>
<th>Analyzing Thoughts and Feelings</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Not Applicable</th>
<th>NOT Important</th>
<th>Somewhat Important</th>
<th>Neutral</th>
<th>Important</th>
<th>VERY Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Debriefing helped me to analyze my thoughts</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>NA</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. The facilitator reinforced aspects of the healthcare team’s behavior</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>NA</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. The debriefing environment was physically comfortable</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>NA</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. Unsettled feelings from the simulation were resolved by debriefing</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>NA</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
### CULTIVATING A CULTURE OF COMPASSION

#### Learning and Making Connections

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Not Applicable</th>
<th>NOT Important</th>
<th>Somewhat Important</th>
<th>Neutral</th>
<th>Important</th>
<th>VERY Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Debriefing helped me to make connections in my learning</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>NA</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. Debriefing was helpful in processing the simulation experience</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>NA</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. Debriefing provided me with a learning opportunity</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>NA</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. Debriefing helped me to find meaning in the simulation</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>NA</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9. My questions from the simulation were answered by debriefing</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>NA</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10. I became more aware of myself during the debriefing session</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>NA</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>11. Debriefing helped me to clarify problems</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>NA</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>12. Debriefing helped me to make connections between theory and real-life situations</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>NA</td>
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<td>2</td>
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</table>

#### Facilitator Skill in Conducting the Debriefing

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Not Applicable</th>
<th>NOT Important</th>
<th>Somewhat Important</th>
<th>Neutral</th>
<th>Important</th>
<th>VERY Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>13. The facilitator allowed me enough time to verbalize my feelings before commenting</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>NA</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>14. The debriefing session facilitator talked the right amount during debriefing</td>
<td>1</td>
<td>2</td>
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<td>4</td>
<td>5</td>
<td>NA</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>15. Debriefing provided a means for me to reflect on my actions during the simulation</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>16. I had enough time to debrief thoroughly</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>17. The debriefing session facilitator was an expert in the content area</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
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<td>Agree</td>
<td>Strongly Agree</td>
<td>Not Applicable</td>
<td>NOT Important</td>
<td>Somewhat Important</td>
<td>Neutral</td>
<td>Important</td>
<td>VERY Important</td>
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<td>3</td>
<td>4</td>
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<td>1</td>
<td>2</td>
<td>3</td>
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<td>5</td>
</tr>
</tbody>
</table>

**Appropriate Facilitator Guidance**

<table>
<thead>
<tr>
<th>18. The facilitator taught the right amount during the debriefing session</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Not Applicable</th>
<th>NOT Important</th>
<th>Somewhat Important</th>
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<th>Important</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>NA</td>
<td>NA</td>
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<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>19. The facilitator provided constructive evaluation of the simulation during debriefing</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Not Applicable</th>
<th>NOT Important</th>
<th>Somewhat Important</th>
<th>Neutral</th>
<th>Important</th>
<th>VERY Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>NA</td>
<td>NA</td>
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<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>20. The facilitator provided adequate guidance during the debriefing</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Not Applicable</th>
<th>NOT Important</th>
<th>Somewhat Important</th>
<th>Neutral</th>
<th>Important</th>
<th>VERY Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>NA</td>
<td>NA</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Comments:

*We would like to know a little more about you:*

Sex: _____ Female _____ Male   Your Age: ___________ Ethnicity ___________________

Date of your debriefing: _______ Title of your course and course #: ___________________

Number of participants in your debriefing group: _____

Number of debriefings you have participated in previously: _______

What is your professional background (e.g. MD, RN, Pharmacist, OT or other)? ___________________

If you are already a licensed health professional, how many years of direct patient care have you had? _____ years

Are you a health professions student? _____ Yes _____ No

If yes, in what profession? ___________________
## APPENDIX V

### Purposed Budget for this QI Project

**Projected Budget**

<table>
<thead>
<tr>
<th>Line Item</th>
<th>Activity</th>
<th>Timeline</th>
<th>Cost</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>360 HD VR Video Camera and setup</td>
<td>Storytelling</td>
<td>2016 Quarter (3)</td>
<td>N/A</td>
<td>1000</td>
</tr>
<tr>
<td>Apple Mobile App Developer License</td>
<td>Licensing fee</td>
<td>2016 Quarter (3)</td>
<td>$99/year</td>
<td>100</td>
</tr>
<tr>
<td>Google Cardboard Viewing Device</td>
<td>VR viewing</td>
<td>2016 Quarter (4)</td>
<td>$10/unit (50 units)</td>
<td>500</td>
</tr>
<tr>
<td>IT (app) Consultant</td>
<td>Development</td>
<td>2017 Quarter (1)</td>
<td>20 hours ($30/hr)</td>
<td>600</td>
</tr>
<tr>
<td>Camera Crew</td>
<td>Professional</td>
<td>2017 Quarter (1)</td>
<td>10 hours ($25/hr)</td>
<td>250</td>
</tr>
<tr>
<td>Video Editing staff</td>
<td>Professional</td>
<td>2017 Quarter (1)</td>
<td>20 hours ($20/hr)</td>
<td>400</td>
</tr>
<tr>
<td>Administrative Assistance</td>
<td>Scheduling Editing</td>
<td>2017 Quarter (2)</td>
<td>20 hours ($15/hr)</td>
<td>300</td>
</tr>
<tr>
<td><strong>Total Cost</strong></td>
<td></td>
<td></td>
<td></td>
<td>$3150</td>
</tr>
<tr>
<td><strong>Budget</strong></td>
<td></td>
<td></td>
<td></td>
<td>$3500</td>
</tr>
<tr>
<td><strong>Variance</strong></td>
<td></td>
<td></td>
<td></td>
<td>$350</td>
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</tbody>
</table>
Appendix W

Returned on Investment of the QI Project

Cost Avoidance Analysis

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Cost of replacing one newly graduated nurse at 125% annual salary (Average annual salary = $96,000)</td>
<td>120,000</td>
</tr>
<tr>
<td>B. Cost of the nurse residency program for the first year (N = 29) (Wages + Instruction Costs + Simulation + Administrative Costs) ($109,620 + $4,860 + $7,200 + $600)</td>
<td>122,280</td>
</tr>
<tr>
<td>C. Initial Cost of the mobile app and toolkit (Subsequent annual maintenance cost of 20%)</td>
<td>3,150</td>
</tr>
<tr>
<td>D. Cost of avoidance at 10% turnover with 29 graduates (10% x 29 x $120,000)</td>
<td>348,000</td>
</tr>
<tr>
<td>E. Cost of avoidance at 5% turnover with 29 graduates (5% x 29 x $120,000)</td>
<td>174,000</td>
</tr>
<tr>
<td>F. Projected net program benefit Item D – Item E</td>
<td>174,000</td>
</tr>
<tr>
<td>G. Current net program benefit (10% = excellent outcome) Cost of avoidance - the cost of the program without the app (Item D – Item B)</td>
<td>225,720</td>
</tr>
<tr>
<td>H. Projected net program benefit (5% = exceptional outcome) Cost of avoidance - the cost of the program with the app (Item E – Item B – Item C)</td>
<td>48,570</td>
</tr>
<tr>
<td>I. Divide projected net program benefit (exceptional 5%) by the total of subsequent year cost ($174,000 divided by $125,430)</td>
<td>1.39</td>
</tr>
<tr>
<td>J. Project ROI improvement: 1.39 x 100%</td>
<td>139%</td>
</tr>
</tbody>
</table>

Total benefit for the first year 39% ($48,570)
### Appendix X

**Key terms and definitions**

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile application (app)</td>
<td>Software for use on a mobile platform</td>
</tr>
<tr>
<td>Mobile learning (mLearning)</td>
<td>Learning platform support by mobile devices</td>
</tr>
<tr>
<td>Mobile device</td>
<td>A handheld computing device characterized by a touch-screen display for input, streamlined operating system, and apps</td>
</tr>
<tr>
<td>Operating system (OS)</td>
<td>Device software that manages its memory, processes, and overall performance</td>
</tr>
<tr>
<td>Mobile Store (app store)</td>
<td>Online store where mobile apps may be downloaded and purchased for the device</td>
</tr>
<tr>
<td>Social media</td>
<td>Networks of communication focused on electronic interactions between users where content is shared, created, and ideas exchanged</td>
</tr>
<tr>
<td>Smartphone</td>
<td>Small portable mobile device focused on communications through messaging and voice-to-voice communication supported by cellular services</td>
</tr>
<tr>
<td>Virtual Reality (VR)</td>
<td>a computer technology that uses Virtual reality headsets, sometimes in combination with physical spaces or multi-projected environments, to generate realistic images, sounds and other sensations that simulate a user's physical presence in a virtual or imaginary environment.</td>
</tr>
<tr>
<td>Augmented Reality (AR)</td>
<td>a live direct or indirect view of a physical, real-world environment whose elements are augmented by computer-generated sensory input such as sound, video, graphics or GPS data.</td>
</tr>
<tr>
<td>Mobile Learning (M-learning)</td>
<td>is &quot;learning across multiple contexts, through social and content interactions, using personal electronic devices.&quot; A form of distance education, m-learners use mobile device educational technology at their time convenience. M-learning technologies include handheld computers, MP3 players, notebooks, mobile phones and tablets. M-learning focuses on the mobility of the learner, interacting with portable technologies. Using mobile tools for creating learning aids and materials becomes an important part of informal learning. M-learning is convenient in that it is accessible from virtually anywhere. Sharing is almost instantaneous among everyone using the same content,</td>
</tr>
</tbody>
</table>
which leads to the reception of instant feedback and tips. This highly active process has proven to increase exam scores from the fiftieth to the seventieth percentile, and cut the dropout rate in technical fields by 22 percent. M-learning also brings strong portability by replacing books and notes with small devices, filled with tailored learning contents.

**Mindfulness**

is the psychological process of bringing one's attention to the internal experiences occurring in the present moment, which can be developed through the practice of meditation and other training. The term "mindfulness" is a translation of the Pali term *sati*, which is a significant element of some Buddhist traditions. In Buddhism, mindfulness has been advocated as a way to spiritual enlightenment and cessation of suffering. The recent popularity of mindfulness in the West is generally considered to have been initiated by Jon Kabat-Zinn.