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# Improving Value Based Purchasing Through the Implementation of the Clinical Nurse Leader Role: The Chief Nursing Officer's Case for Change

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**Improving Value Based Purchasing  
Through the Implementation of the Clinical Nurse Leader Role:  
The Chief Nursing Officer's Case for Change**

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### **Abstract**

The healthcare industry is focused on the implementation of the Affordable Care Act, the payment reform package from Centers for Medicare and Medicaid Services and the development of Accountable Care Organizations. The decisions, behaviors, and practices of medical and clinical staff directly impact patient care, quality, and subsequently cost and reimbursement. The imperative to balance quality and patient safety with cost effectiveness requires a complex orchestration of all the elements of care within the clinical microsystem. A priority is to support and enable bedside nurses' daily practice, priorities, and decision-making. This can be accomplished through the implementation of the Clinical Nurse Leader. This Master's prepared advanced generalist has been educated in healthcare reform and its impact on patient safety, quality, and the organization's financial condition. An evidence-based business case will demonstrate the outcomes and a return on investment for the Clinical Nurse Leader role. The Chief Nursing Officer can employ transformational leadership skills to articulate the need and benefit of such a role, and influence an organization to invest in this valuable intervention.

*Keywords:* Chief Nursing Officer, CNO, Clinical Nurse Leader, CNL, Value Based Purchasing, VBP, education, quality, pay for performance, evidenced-based practice.

## **Improving Value Based Purchasing Through the Implementation of the Clinical Nurse**

### **Leader Role: The Chief Nursing Officer's Case for Change**

The healthcare industry in the midst of the most sweeping policy, reimbursement, and care delivery changes in history. In 2010, the Patient Portability and Affordable Care Act (ACA) identified new structures and mechanisms to reduce costs and increase quality. The shift by the Centers for Medicare and Medicaid Services (CMS) to incentive payments based on performance of quality and satisfaction outcomes have created even greater challenges for hospitals. Value Based Purchasing (VBP) was the first CMS program to render payment for services based on a hospital's quality and patient satisfaction performance. The intent of VBP is to incentivize organizations to deliver care through an integrated and coordinated system which would ultimately lower cost and increase quality as measured by performance on standard quality, satisfaction, and safety outcomes (Kaiser Family Foundation, 2013).

As a result of ACA and VBP, healthcare organizations have been determining ways to constrain or reduce costs while preserving access, quality and service. However, many hospitals continue to underperform against state and national benchmarks (CMS, 2013a). While hospital executives share the ultimate accountability for organizational performance, the primary accountability rests with the Chief Nursing Officer (CNO) due to the leadership scope of clinical operations. Today, more than any time in history, the CNO's leadership skills and the decisions of clinical nurses at the point of care will influence economic gains or losses for the organization.

## **Background Knowledge**

Healthcare reform has rewritten “the rules of the game” for healthcare in the United States (US). The new payment formulas based on performance expectations have created significant challenges for acute care hospitals as quality and patient satisfaction measures are now directly related to reimbursement. In 2013, 1% of each hospital’s Medicare payments were “taken back” and redistributed as incentive payments. Incentive payments were earned for improvement against a baseline period and the performance of other CMS hospitals between the 50th and 95th percentile nationally, based upon the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS). For example, a hospital that did not meet the performance benchmarks in 2013 earned back only 0.2% of the withheld 1% incentive for a net reduction of 0.8%. Based on the CMS incentive formula, the reduction will continue to increase up to 2% on HCAHPS and quality measures until 2017 (CMS, 2013b).

Every year the VBP performance bar will be raised. In 2013 ten previously tracked clinical quality measures were excluded because CMS concluded that these measures were “topped-out” signifying that nearly all hospitals have achieved a similar high level of performance. Thirteen new measures were selected. Concurrently, under payment reimbursements, fully integrated delivery systems are linking medical and institutional providers across all settings and service levels to manage the health of designated populations (CMS, 2013c).

In contrast to the performance on clinical quality measures, HCAHPS survey scores have been slower to improve across the board nationally. On average, California hospitals have performed lower on the patient experience dimension of VBP measures compared with

national performance. According to the most recently published HCAHPS survey results of July 2013, California hospitals lag the nation in the “overall hospital rating” and “recommend the hospital” rating. These were the two most important cumulative measures for impacting hospital VBP reimbursement under CMS (CMS, 2013d). The implementation of the ACA will emphasize cost and quality performance with the challenge of fewer resources, decreasing inpatient volumes and revenues.

Nationally, individual and collective hospital performance has been monitored primarily at administrative levels. Due to the public availability of the quality and service performance data, a hospital can easily compare itself to any single hospital or group by consulting the CMS Hospital Compare Website (CMS 2012). This information has been accessible to the general public in a searchable website format and the data is normalized and updated at quarterly intervals. However, financial implications are not well understood by hospital staff. Most importantly, nurses and physicians need a clear understanding of the VBP and the impact of their practice on the hospitals’ performance.

### **Local Problem**

It has been increasingly unacceptable for hospitals to perform poorly on both publicly reported clinical care process and HCAHPS measures. In 2013 CMS reimbursement changes became a reality, coupled with new clinical care measures, readmission penalties and the need to form or join functioning integrated delivery systems. The changes in the CMS payer strategy has reduced hospital volumes and revenue creating concern on the part of hospital boards of directors and medical staff inadequately prepared for managed care.



CNOs from the hospitals in this project were interested in improving VBP scores. In particular, each of the hospitals' HCAHPS performance created more pressure on the CNO and reflected negatively on nursing over the course of 2012 and 2013. CNOs reported that most measures had reached a plateau short of the benchmark, in spite of applying best practice interventions. Furthermore, CNOs felt the interventions lacked staff engagement and consistent follow through. They desired methods to engage and educate clinical nurses and managers in a participative understandable manner, consuming minimal time and resources.

### **Intended Improvement and Purpose of Change**

#### **Project evolution.**

Initially, the project aim was to increase nurses' knowledge about healthcare reform and to design an evidence-based resource bundle to improve performance on VBP metrics. The bundle was intended to be a collection and consolidation of applicable evidence-based practices (EBPs) to improve performance on VBP metrics. Evidenced-based toolkits and resources were becoming rapidly available in the literature and through professional sources and public agencies such as the Agency for Healthcare Research and Quality (AHRQ) (AHRQ, 2012). Through the process of developing this project, which included discussions with Doctorate of Nursing (DNP) students and CNOs, a critical theme emerged. The lack of a clinical mentor to identify, translate, and implement evidence-based knowledge into practice across multiple disciplines and in multiple settings became evident.

The Clinical Nurse Leader (CNL) is the answer to the clinical resource gap. As a Master's prepared advanced generalist registered nurse (RN), the CNL manages and provides patient care across multiple settings by assimilating and applying evidence-based

approaches to design, implement, and evaluate plans of care. The CNL is educationally prepared to provide quality, cost-effective care, to participate in the implementation of care in a variety of health care systems, and to assume a leadership role in managing fiscal and health care resources at the microsystem level. The role was also designed to facilitate the use of evidence-based interventions across care multiple settings and disciplines and break down silos through lateral integration of care processes to improve the financial and quality performance of an organization (AACN, 2007). Magg, Buccheri, Capella, and Jennings (2006) described the AACN's concept of the CNL's preparation as being a joint venture between practice and education.

Through the course of the project, the focus of the project shifted from the VBP evidence-based toolkit content to the mechanism to bring knowledge to the point of care through the CNL role. At this point, the aim broadened from the education of the CNL to supporting the CNO's broader leadership and practice strategy. Implementing the CNL role could enable the CNO to produce multiple integrated outcomes around quality, service, and economics and achieve success in a pay for performance environment. Although the role existed since 2007 (AACN, 2007) it has not been widely adopted. The question loomed, "Why wasn't the CNL role more prevalent in the hospital setting?"

Although evidence of the CNL's impact on quality and patient safety existed, anecdotal reports from CNOs participating in this project were not broadly supportive of the role. The primary barriers expressed by the CNOs participating in the project were: (a) the need for a clear articulated value proposition to justify a return on investment (ROI), and (b) clarification on how to integrate and implement the role, and (c) overlap of the CNL with other existing nursing resources.

**Intended improvement.**

Hospitals have been searching for ways to connect clinicians to the financial and quality performance of the organization. The majority of the levers required for achieving and sustaining performance on VBP's quality of care measures fall into the scope and accountability of the CNO. The CNO's leadership imperative is to ensure that care is coordinated and quality and safety are achieved in a manner that contributes to the overall success of the organization. To do so requires the integration of medical and nursing practice with systems that support and facilitate safe and efficacious patient care delivery.

The introduction of CNLs into the clinical care team should be considered to accelerate and sustain this goal. The CNL is able to educate clinical nurses about the implications of healthcare reform, VBP and outcome based reimbursement. Building upon the clinical nurse's understanding of healthcare reform, the CNL will impact care outcomes by translating clinical evidence into practice.

**The purpose of the change.**

The aim was to educate the CNL in VBP and to assist the CNO to improve VBP through the implementation of the CNL role. A bundle or group of interrelated components or tools was developed, implemented and evaluated over the course of the project. The bundle contained two main components to support the aim. The components could be utilized together or independently, based upon the situation, needs, timing, and resources. The first component was an education module comprised of a four-hour class and a VBP presentation. Both the class and presentation would be appropriate for either the classroom or hospital setting. The class was designed in four one-hour sections for flexibility. The class is interactive and includes key Internet links to evidence-based resource, learning

activities, and the VBP presentation. The second component was an evidence-based business case for use by CNOs to propose the integration of the CNL role into their care delivery model to facilitate and sustain performance improvement.

There were two tests of change (TOC). A TOC supported each component of the bundle. The first TOC addressed the question: Will the class and VBP presentation effectively educate both graduate nursing students and hospital-based practicing RNs? A team approach for identifying an EBP change to improve quality performance was included in the VBP presentation for use by any group. The framework followed the Plan-Do-Study-Act (PDSA) rapid improvement cycle approach.

The second TOC evolved after initial interview meetings with the practicing CNOs. After discussion of the educational module and its applicability for the CNL in their organizations, they shared that they did not have the role in their care delivery model but were interested if a justification could be articulated for proposal to the Board of Directors. Therefore, the second TOC was: Would the CNO use a sample evidence-based case template to secure financial approval for a CNL pilot program?

### **Review of the Evidence**

The project focus was improving performance of VBP elements through the CNL role and leveraging the transformational leadership skills of the CNO to make the case to the organization to implement the role. These areas were the focus of the evidence and literature reviews.

#### **The evidence supporting the impact of the CNL.**

The CNL's understanding of the relationship between the nurses' work and the hospitals' financial success is vital. VBP, a major initiative within healthcare, intersects

with the daily practice of the CNL. Understanding of VBP is critical to informing the nurses' daily practice, priorities and decision-making in the hospital setting. Decisions made on a daily basis will impact outcomes of care and the hospital's financial position. Establishing the value of the CNL role in this process is important and required a systematic review and rigorous search methodology to minimize bias. The process outlined by Bettany-Saltikov (2010) was used as a guide for a systematic review.

An evidence question was formulated using the population, intervention, comparative intervention, outcomes components, and time (PICOT) (Melnik and Fineout-Overholt, 2011). The PICOT was as follows:

P = clinical nurse leader; I = role integration into the acute care microsystem; C = the acute care microsystem without CNL(s); O = patient quality outcomes, safety, patient satisfaction, and return on investment; T = 2007-2013.

The search question was: What has been the impact of the CNL role in the acute care microsystem as measured by patient quality outcomes, safety, satisfaction and return on investment? Key words were: clinical nurse leader, CNL role implementation, quality, patient satisfaction, outcomes, patient safety, clinical microsystem, study, review, evaluation, evidence, and return on investment. A search was conducted using CINAHL, Fusion and Cochrane library. Limiters were English peer reviewed nursing journals between 2007 and 2013. This search produced 532 articles that were narrowed down to 156 relevant to the topic. Eleven articles relevant to the topic were critically appraised using Johns Hopkins Evidence-Based Practice Research Appraisal (JHEBPRA) (White and Poe, 2010) and entered into an evidence table (see Appendices A and B).

Evidence of the impact of the CNL role on quality, patient safety, satisfaction and cost reduction produced positive findings, supported intuitive knowledge and demonstrated a strong return on investment (Porter-O'Grady, Clark, & Wiggins, 2010). Bender, Connelly, Glaser, and Brown (2012) demonstrated the positive impact of the CNL on patient satisfaction, pre and post implementation of the role. A short interrupted time series design was used to measure patient satisfaction in multiple aspects of care 10 months before and 12 months after integration of the CNL role on a progressive care unit, compared with a control unit. Data were obtained from standardized patient satisfaction surveys and an analysis was completed for short time series data streams. Improvement was seen between the pre and post implementation time periods for the unit with the CNL while the control unit remained unchanged for both time periods (Bender, Connelly, Glaser, & Brown, 2012).

The Veterans Administration Medical Centers (VAMC) conducted a qualitative study following the implementation of the CNL role within the VAMC system. The data suggested that the CNL role positively affected the RN hours per patient day and quality indicators. Quality indicators that demonstrated improvements were a reduction in: (a) GI case cancellations, (b) sitter usage, (c) pressure ulcers, and (d) ventilator assisted pneumonia. Additional findings were increases in: (a) restorative dining, (b) discharge teaching compliance, (c) patient satisfaction, and (d) innovation. The authors noted that integration of the role across all practice areas had potential to streamline and coordinate care (Ott et al., 2009).

Stanley et al. (2008) conducted a qualitative study using three case studies that followed newly graduated CNLs. Each case study was from a different location and facility. The CNLs maintained journals that were evaluated for indications of innovation,

development of lateral team relationships, and patient relationships. Pre and post implementation outcome data were collected on: (a) clinical quality core measures, (b) patient satisfaction, (c) physician satisfaction, (e) customer loyalty, (f) employee engagement, (g) turnover, (f) vacancy rates, and (g) length of stay for their units. Improvement was seen in every indicator in each setting for the period compared to the immediate prior period. Although the authors could not conclude a direct relationship between the CNL role implementation and the changes in outcomes measures, there was a significant cost savings in very short periods of time and similar quality and outcomes have been reported across the country (Stanley et al., 2008).

Tachibana and Nelson-Peterson's (2007) case study describing Virginia Mason's implementation of the CNL role focused on the management of a complex patient population in the acute care setting. Benefits of reduced length of stay (7%), better continuity and coordination, and higher patient satisfaction were reported for the population. In addition to the benefits above, the authors asserted that the CNL role successfully addressed the gap for patients with complex care needs by providing a graduate level nurse who could articulate the plan of care across shifts and disciplines, improve patient outcomes and satisfaction, and provide resources and expertise to patients and staff (Tachibana & Nelson-Peterson, 2007).

Wilson et al. (2012) found similar results in a qualitative descriptive study of a single hospital CNL cohort between 2007 and 2012 using pre and post intervention data on quality and financial measures. A cohort of practicing CNLs evaluated the effectiveness of the role with case studies and clinical outcome measures, financial savings, reduction in *Clostridium Difficile* (c-diff) infection rates, increase in core measures, and patient education

demonstrated consistently across various patient populations. Cost savings in excess of \$2.5 million were documented demonstrating CNLs' attention to fiscal stewardship. For example, over \$793,000 was saved in one year on the prevention of catheter-associated blood stream infections, reduction of pressure ulcers, and avoiding the need for higher level of care in pediatric patients (Wilson et al., 2012).

Analysis of pre and post implementation scores on VBP measures can demonstrate a return on investment of the CNL role. Quantification of the value of the CNL can be accomplished using an accepted method for identifying the cost of various clinical conditions and adverse events. Spetz, Brown, Aydin, and Donaldson (2013) illustrated a framework for costs analysis using AHRQ's Quality Indicators Toolkit. Based on data from the Collaborative Alliance for Nursing Outcomes (CALNOC) the researchers quantified the monetary value of the cost of care and savings as a result of reducing hospital acquired pressure ulcers (Spetz, Brown, Aydin, & Donaldson, 2013).

The CNL's impact on quality and safety has created increasing interest in implementing this role. Insight into CNO's support to fund and implement this clinical role has been important. Sherman (2008) conducted a grounded theory methodological study to understand why CNOs involved their organization in a 2004 CNL pilot project. Interviews of 25 CNOs were transcribed and analyzed. Themes and concepts that emerged from the data were coded into categories that formed an explanatory framework for organizational involvement. Five major factors were identified to explain organizational participation. They were: (a) organizational needs, (b) a desire to improve patient care, (c) an opportunity to redesign care delivery, (d) professional development of nursing staff, and (e) potential to enhance physician-nurse relationships (Sherman, 2008).



The degree of successful integration of the CNL into the clinical microsystem had a bearing on outcome performance. Moore and Leahy (2012) and Wilson et al. (2013) studied CNLs' perceptions of their introduction into a hospital setting. These qualitative studies indicated that the CNO support and positioning was a critical element of the success or failure in the implementation of the CNLs' role (Moore & Leahy, 2012; Wilson et al., 2013). Studies of barriers to success also indicated a lack of: (a) understanding about the role throughout the organization, (b) an organized and systematic entry process, and (c) visible support from the CNO and nursing leadership (Bender et al., 2011; Bombard et al., 2010; Kitson et al., 2011).

#### **Transformational leadership.**

The second area of evidence centered on transformational leadership and the CNO. The CNO is required to plan, position, sell and support the new CNL role in the organization. A literature search was also conducted on the topic. The PICOT was as follows:

P = Chief Nursing Officer; I = transformational leadership; C = the inability of the CNO to effect change; O = patient quality outcomes, safety patient satisfaction, and return on investment; T = 2008-2013.

The search question was: How have CNOs used transformational leadership skills to position and implement organizational change? Key words were: Chief Nursing Officer, and transformational leadership. A search was conducted using Scopus and Fusion. Limiters were English, peer reviewed journals between 2003 and 2013. This search produced 1284 articles that were narrowed down to 45 relevant to the topic. Six articles

relevant to the topic were critically appraised and entered into an evidence table (see Appendix C).

Bass and Avolio (1993) compared and contrasted transformational and transactional leadership styles and their impact on the organization. They asserted that organizations should move more toward transformational behaviors of influence, inspirational motivation, intellectual stimulation and individualized consideration in order to move the organization forward (Bass & Avolio, 1993).

A Meta analysis conducted by Yuki (2012) proposed a hierarchy of transformational leadership traits grouped into four categories: (a) task-oriented, (b) relations-oriented, (c) change-oriented, and (d) external behaviors. Bass and Bass (2008) explained three transformational leadership competencies with associated traits. The competencies are comprised of cognitive, social, and emotional competence. All competencies are positively supported by biophysical and character traits. In contrast, leadership effectiveness is negatively impacted by traits such as: (a) arrogance, (b) depression, (c) anxiety, (d) rigidity, and (e) lack of self-confidence, self-esteem, and self-efficacy (Bass, & Bass, 2008). The effective CNO must exhibit the positive competencies and behavior as evidenced in the transformational leader.

Contemporary healthcare organizations experience an unprecedented and accelerated pace of change. The rapidly changing healthcare environment requires a highly flexible and adaptive or transformational leadership style. Leaders must be able to understand and interpret changes and then generate creative solutions while developing the broader team's leadership capabilities (Bass, Jung, Avolio, & Berson, 2003). Additionally, Bass and Riggio (2006) note that the demand and velocity of change requires a transformational leader who

is able to develop a vision, and inspire others to commit to a shared vision and goals for an organization or unit, while challenging them to be innovative.

The ANCC's Magnet Recognition Program (2008) described five components. First and foremost was transformational leadership. The ANCC asserts that in contrast to leading people where they want to go, the transformational leader must lead people where the need to go and be, in order to meet the demands of the future. Vision, influence, clinical knowledge and expertise in relating to a professional practice are imperative. However, the CNO must understand that transformation may create turbulence and require atypical approaches. The transformational leader will enlighten the organization and stakeholders as to the need for change, then clarify and articulate each participant's role in achieving change. Along the way the leader must listen, challenge, influence, and affirm until the change takes root and the organization enlists and adapts (ANCC, 2008).

Clavelle, Drenkard, Tullai-McGuinness, and Fitzpatrick (2012) surveyed 384 CNOs of ANCC Magnet recognized hospitals. They found that as CNOs grew older and gained more experience they demonstrated an increase in transformational leadership attributes. They concluded that organizations should value and retain CNOs while supporting their advancement and development (Clavelle, Drenkard, Tullai-McGuinness, & Fitzpatrick, 2012).

Transformational leadership in nursing is a universal concept and more valued as leaders mature. A study conducted of Chinese nursing administrators in Director of Nursing (DON) and Chief Operating Officer (COO) roles gauged the importance of role competencies based on the Forces of Magnetism. A random sample of 300 Chinese DONs and COOs were surveyed in 2008. The DONs were predominately female and had less

graduate education but more experience in their current role than the COOs. Both groups perceived structural empowerment to be important, however the DONs placed significantly greater importance on transformational leadership (Spicer et al., 2011).

### **Conceptual and Theoretical Frameworks**

Several related theoretical and conceptual and frameworks informed this project: (a) transformational leadership theory, (b) the EBP model using the Plan-Do-Study-Act (PDSA) change model, and (c) a conceptual framework for CNL education.

#### **Transformational leadership.**

Transformational leadership is a management and communication style that can assist the CNO may to introduce new and innovative strategies to solve the most challenging situations and garner stakeholder support. The transformational CNO is aspirational and inspirational, creating and articulating a shared vision of goals and outcomes while using a transactional style to get things done. The CNO conducts himself/herself as a visible, present, genuine, and authentic leader with a style that personally inspires a team to remain focused and motivated while meeting challenges.

As performance expectations continue to rise, the CNO's reliance on transformational leadership skills increases. These skills enable the CNO to orchestrate, motivate, inspire, and challenge the organization with increasingly more complex interventions to achieve and sustain goals. Transformational leadership includes building a culture of effective performance. As the leader creates, translates, and communicates a vision, they are enlisting others in building a culture to support that vision. Both strategic thinking and tactical skill contribute to the realization the vision (Bass & Avolio, 1993). The transformational CNO sees implications for the future and identifies or creates

strategies to drive processes, using data and evidence to support the strategies. Ultimately, the successful CNO translates the strategies into tactics that stakeholders can harness.

### **Evidence-based practice.**

The EBP model provides an approach for the improvement of patient care quality and safety outcomes. EBP is widely known to reduce morbidities, mortality, medical errors, and variation. However, clinicians do not consistently utilize it in healthcare systems across the US (Melnyk, Fineout-Overholt, Gallagher-Ford, & Kaplan, 2012).

A study of 1051 RNs, conducted by Melnyk et al., (2012) found that although nurses believe in EBP they had a lack of knowledge and skills. EBP was perceived to be burdensome, time consuming, and not supported by the organizational culture. Factors found to facilitate EBP were: (a) strong beliefs that EBP improves care, (b) access to mentors, and (c) a supportive culture (Melnyk et al., 2012).

Given the chasm between theory and practice, a simple but effective performance improvement and change model was helpful and recommended. Johns Hopkins Nursing and the Institute for Healthcare Improvement (IHI) (2011) recommended the use of PDSA as the framework for working with clinicians to improve processes and accelerate change in conjunction with EBP (Newhouse, Dearholt, & Galleger-Ford, 2007; White & Poe, 2010; IHI, 2011).

The PDSA quality improvement process is complimentary to an evidence-based practice approach to clinical decision-making. The PDSA model was initially intended as a continuous cycle of change or improvement (Lipshutz et al., 2008). The initial cycle typically produces the most simple to implement ideas. However, successive cycles are required in order to drill down to root causes providing deeper inquiry to address more

complex levels of the problem (Seidl & Newhouse, 2012).

The PDSA framework has been very effective in managing iterative improvement and practice changes as part of an EBP project. The PDSA process builds on participation and empowerment strategies to engage teams. As a rapid cycle improvement model, it is effective with clinical staff and physicians who have: (a) limited time, (b) a high degree of investment in the interventions and the outcomes, and (c) considerable firsthand knowledge of the processes needing improvement (White & Poe, 2010).

The CNL role is a fundamental link to evidence-based knowledge and subsequent change in practice at the point of care. As a lateral integrator in the care delivery model, the CNL relies on educational preparation in EBP to interpret and spread knowledge in order to change practice. The EBP process enables the CNL to evaluate research and profound knowledge, with an understanding of patient preference, to create and implement individualized nursing interventions (Magg et al., 2006). This patient-centered approach positively impacts quality and satisfaction outcomes.

#### **Conceptual framework for CNL education.**

The education module for the CNL was informed by the work of Magg et al. (2006) in the articulation of a dynamic and integrated three-tiered conceptual framework for a Clinical Nurse Leader Program. The framework drove the design and model for the University of San Francisco School of Nursing and Health Professions (USF) program for the education of the CNL. Guidelines were based on educational guidelines published by the AACN (2004). The first tier was comprised of two foundational theoretical frameworks for practice and clinical care. The first theoretical framework was Transition Theory (TT) that focused on practice phenomena and clinical processes (Meleis, Sawyer, Im, Messias, &

Schumaker, 2000). The second was the Symptom Management Model (SMM), an evidenced-based framework capitalizing on the view of system interrelatedness (Dodd, 2001).

Leadership is a cornerstone and core competence of the CNL educational framework. The middle tier integrates the constructs of knowledge elements, nursing leadership and clinical outcomes management. At this level the CNL integrates clinical knowledge and leadership skills to implement EBP and influence clinical teams. The top tier is concerned with self-regulated learning and the interdependence of the elements of active learning, reflection and EBP. As an accountable and enthusiastic learner, the CNL actively plans, manages and assesses his/her own learning behaviors (Magg et al. 2006).

The CNL has an important role in care transformation by providing leadership in the clinical microsystem using personal knowledge and skills to advance practice and outcomes. The CNL works across all settings to provide oversight, judgment, and intervention in the planning and delivery of care. In this process the CNL is relying on a framework of leadership and EBP. Through modeling, directing, and enlistment, the CNL influences others constructively and ultimately patient care (Magg et al., 2006).

The three tiers are reflected in the educational module via the integration of information about VBP, evidenced-based interventions, and using personal leadership to teach, influence, model, and translate knowledge into practice through a self-directed and self-learning approach.

### **Methods**

The bundle was developed for educators, CNLs and CNOs. The purpose was to educate, improve, and sustain performance in metrics measuring quality, patient safety, and

satisfaction with the hospital experience. Targeted groups were (a) DNP students, (b) CNL and Master's of Science in Nursing (MSN) students, (d) hospital-based CNLs, educators, and administrative nurse leaders; and (g) CNOs.

Each component was presented to and reviewed by the appropriate audience for relevancy and applicability. The reviewers, by virtue of their role, were considered qualified to evaluate the contents of each component for its applicability in their practice. The implementation of the tools occurred in two rounds or cycles. The first round of evaluation covered the content for the education module components (class and presentation) by DNP students and USF nursing faculty and CNL/MSN students. The initial results of the reviews were positive overall and suggestions for modification were incorporated into subsequent versions and reviewed by the second round reviewers. The second round reviewers included hospital-based (a) clinical nurses, (b) administrative nurse leaders, and (c) CNOs.

### **Ethical issues**

The University of San Francisco Institutional Review Board (IRB) approved the project as a performance improvement project (see IRB waiver in Appendix D). Ethical aspects related to the implementation of the bundle arose when two of the three participating CNOs departed their roles in their organizations within 30 days of each other. Both cited performance on VBP metrics as a factor. This occurred within two weeks of the authors' scheduled presentation of the education module and CNL business case to the managerial and clinical leaders of both facilities and the facilitated implementation of the performance improvement process, i.e., the Tune Up. Although the CNOs had paved the way to continue in their absence, a decision was made by the author and CNOs to not proceed primarily due to the absence of an identified leader and champion. However, the CNOs



were able to participate in the evaluation process on the bundle and their feedback was incorporated into revisions.

### **Setting**

The project provided an education module for CNL students intending to practice in the hospital setting in a position to influence clinicians at the point of care. The information focused on hospital-based payment programs under the ACA and healthcare reform implementation.

The physical setting spanned three California acute care hospitals in large urban areas and two graduate nursing finance classes at USF. One hospital was a faith-based, not for profit, tertiary teaching hospital within a five-hospital health system. The second hospital was a tertiary acute care facility in a large national hospital system. The third hospital was a tertiary single hospital with a diverse patient population and staff. All of the CNOs had doctoral degrees. Two of the three hospitals were unionized.

Each CNO had responsibility for the improvement of quality measures in VBP. The hospitals put focused efforts into increasing the performance of both the clinical process of care and patient experience measures. Each performed better on the clinical process of care measures after employing evidenced based processes and best practices. Although steady progress had been made on quality and clinical process measures, the patient experience scores continued to lag indicating that interventions had reached their maximum benefit and subsequently plateaued.

Given the magnitude of the negative financial impact anticipated in future years, a significant intervention was required. Integration of the CNL into the clinical microsystem is an evidence-based intervention that could provide a strong ROI through cost savings and

loss avoidance. CNLs' preparation for complex patient management, care coordination across disciplines and settings effect quality and patient satisfaction and make this intervention worthy of strong consideration.

The SWOT analysis below considers the bundle intervention and its components of a class, educational presentation and the CNL business case (see SWOT Analysis Table 1).

Table 1

*Strengths, weaknesses, opportunities and threats (SWOT)*

<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>• Education module incorporates evidence-based educational material applicable to the CNL and clinical RN roles</li> <li>• Provides a participative EBP performance improvement approach for the CNL or the CNO to employ</li> <li>• Components can be utilized in a group or unbundled</li> <li>• Provides a case for change to support the CNO’s goals and areas of responsibility</li> <li>• CNLs have demonstrated improvements and positive impact on HCAHPS, Quality and patient safety</li> <li>• Improved recruitment and retention of staff</li> </ul>	<p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>• Leadership opportunity</li> <li>• Improvement in quality, service safety and financial position</li> <li>• Innovation</li> <li>• Redesign of care delivery systems</li> <li>• Service line profitability</li> <li>• Potential for broad distribution into the hands of CNOs who are facing challenges with VBP</li> <li>• Outlines evidence- based interventions that improve quality and reduce costs</li> <li>• Enhancements in care coordination and collaboration</li> <li>• Patient and family satisfaction with level of participation</li> </ul>
<p><b>Weakness</b></p> <ul style="list-style-type: none"> <li>• CNL role requires an investment or modification of an existing care delivery model</li> <li>• Six month commitment may be too short of a time frame to support recruitment</li> <li>• Minimal new grad CNL placements</li> <li>• May require changes to existing roles</li> <li>• Needs “ramp up” time to achieve benefit</li> <li>• Staff resistance to change</li> </ul>	<p><b>Threats</b></p> <ul style="list-style-type: none"> <li>• Reluctance of the hospital to make investment in CNL role</li> <li>• Difficulty recruiting for a short pilot</li> <li>• As reimbursement penalties increase hospitals would compete for the CNL</li> <li>• Time frame for improvement too short</li> <li>• Lack of continuous visible support from CNO</li> <li>• Role confusion between CNL, Advanced Practice RN, manager, supervisor, care coordinator case manager</li> </ul>

A SWOT analysis for the CNL pilot program is also included in A Sample Evidence-Based Case for Clinical Nurse Leader Pilot in the appendices (see sample business case in Appendix G).

**Planning the Intervention**

The project implementation was divided into sequential components. As a performance improvement project, the PDSA cycle was used as the overall framework for the improvements i.e., the education module and the business case for the CNL pilot program.

The work plan activities included:

Plan:

- Collection of evidence for expert feedback and guidance
- Design of the Bundle

Do:

- Implementation of the bundle

Study:

- Evaluation the bundle

Act:

- Modification of the bundle based on evaluation data
- Dissemination of information

As previously discussed, initially the project was limited to the education module for use in the classroom and practice setting. Two USF faculty members and three CNOs provided expert input to guide emphasis on the education module. Through consultation with CNOs it was evident that their practice model lacked a resource like the CNL to implement EBP and lead improvement activities at the bedside. As a result the CNO's case for change or business case proposal for the implementation of a CNL pilot program was added to the bundle and the project.

**Educational module.**

The educational module was designed to enable the CNL to understand and spread the knowledge on VBP within the practice setting using an EBP framework and the PDSA improvement process. The AACN's objectives and competencies for the CNL role and curriculum design for the graduate nurse were reviewed. This framework guided the design of the education module incorporating a variety of means to understand the health reform and VBP. The module's self-learning activities promoted the sourcing of evidence-based patient care interventions. Applicable course objectives were identified in the syllabus for USF N629, the Financial Resource Management Clinical Nurse Leader that were consistent with AACN learning objectives. The course objectives were to assess the flow of financial resources in nursing microsystems from changes to reimbursement and apply evidence-based practice to support the cost-effectiveness of nursing interventions (Maxworthy, 2012).

The educational module contents covered a flexible one to four-hour class including a syllabus, learning objectives, a presentation and PI process. Class materials were designed to begin with a brief overview of healthcare financing models focusing on the role of the US government and implications of the ACA. The material was evidence-based and future-focused; presented in the context of the interdependency of quality, cost, and the patient's experience. A structured learning activity focused on the practical application of the content for the CNL role. A sample of evidence-based tools and interventions were included. The class contained Internet links to evidence-based resources, strategies, tools, and tactics for raising performance on the VBP measures as a resource for use in the practice setting (see VBP class in Appendices E and F).

**The CNO's case for change/business case for CNL role.**

The CNOs confirmed findings in the literature relating that the use of CNLs in the hospital was absent due to lack of understanding and funding. Porter O'Grady et al. (2010) asserted that CNOs have had difficulty articulating, in consistent terms, the CNL's contribution to patient care, improved outcomes, and ROI. Furthermore, the CNL needs to be part of a change in delivery of care or practice model rather than be perceived as another layer or added cost (Porter O'Grady et al., 2010). The 2011 report on the Future of Nursing notes that the ACA provides opportunities for demonstration projects and pilot programs that could concurrently impact nursing elements but also patient safety and quality (IOM, 2011).

Porter O'Grady et al. (2010) recommended a selling process using stories, messaging terms and special language in the articulation of the CNL role and benefit to the organization. Furthermore, it would be beneficial to the use a framework that reflects today's realities to justify the development of the role. Points to cover would be: (a) the CNL role, (b) the ideal recruit, and (c) how the CNL contributes to improvements in quality, safety, patient satisfaction; (d) expertise, (e) cost and avoidance, and (f) nurse mentorship and retention (Porter O'Grady et al., 2010). A business case containing evidence of an ROI and quality improvement that the CNO could articulate in terms of the value proposition was needed.

Armed with the information in this project bundle, CNOs will be able present their case for change, articulate the vision, and draw the relationships and conclusions for the executive and governance level of their organization. Justification would be based on the value of outcome improvements to quality. Performance would be measured on standard,

existing indicators over the pilot year, measured quarterly and analyzed in comparison to performance of baseline or to the prior quarter. The evidence demonstrates that the CNL pilot could be self-funded through cost avoidance; savings and revenue enhancement due to improvements in care outcomes, patient satisfaction, and reduced length of stay.

The CNO's case for change provided a sample business case for the approval and implementation of a CNL pilot program. The CNL proposal included the case for change, supporting evidence, analysis, budget, ROI and measures of success. A sample evidence-based case for a clinical nurse leader pilot was developed for CNO customization (see sample business case in Appendix G).

### **Implementation of the Project**

In-person presentations of the educational module were delivered to all participants by the author, a USF faculty member, or a CNO. The implementation of the project encompassed the design, presentation, and expert evaluation of the bundled resources and tools. Three practicing CNOs received a copy of the educational module and the business case for the implementation of the CNL for their use and review. One CNO presented the module to their nursing leadership team. USF professors also used the educational module in nursing finance classes. These requests speak to the implementation of the material in the classroom and hospital settings to nurses at all levels and its ease of presentation. Following their review of all materials participants were requested to participate in an online anonymous survey to evaluate the education module.

### **Planning the Study of the Intervention**

The educational materials were intended for transfer between the classroom and the hospital setting. For this reason, the educational module was presented to forty participants

and the CNO case for change for CNL implementation was evaluated by three practicing CNOs. A Gantt chart was developed as part of the CNL sample business case and described the one-year timeline of the CNL pilot program can be found in the appendices (see sample business case in Appendix G).

#### **CNL pilot cost benefit analysis.**

The primary cost of the interventions is for education and the cost of employing CNLs in the hospital. The detail of a budget, which included education and employment, costs for CNLs and supervision and support time over the course of the pilot are detailed. The proposal also outlines the financial benefits and the ROI required to gain support from a Chief Financial Officer. The ROI ranges from breakeven to 8.6:1 based on a \$300,000 investment and expense over the course of a year. The program would at least self-fund at 100% in the worst-case scenario. The cost benefit and return on investment of this project are illustrated in the sample scenario of the Sample Evidence-Based business Case for a Clinical Nurse Leader Pilot in the appendices (see sample business case in Appendix G).

Experts in each respective area evaluated components of the bundle. The questions answered were:

- Does the education module contribute to the educational preparation of the CNL?
- Does the content contribute to understanding the objectives of the ACA, VBP and the components that affect hospital practice settings?
- Will the CNL/MSN student understand VBP's implication for practice?
- Could the educational module be used to increase knowledge and understanding of the topic?

The CNOs were asked to evaluate the CNL the sample business case. The questions answered were:



- Was the premise clear?
- Were the basic assumptions evidence-based?
- Was the case for action persuasive?
- Did the case change your position on implementation of CNLs into your hospital?
- Would the case persuade your Executive Team or Board of Directors?
- Do you see the CNL role as part of a care delivery/practice model change?

### **Methods of Evaluation**

Online surveys were created for three target audiences: (a) DNP students and faculty, (b) CNL/MSN students, and (c) practicing CNOs. Survey participation was voluntary. Forty RNs participated in the class. Twenty-nine participants were invited to participate in an online survey and all did so. Seven DNP students, three USF faculty members, sixteen CNL/MSN students, and three practicing CNOs responded to the online survey. Eleven hospital-based nursing administrative leaders gave verbal feedback to their CNO, because the education was provided by the CNO who completed the online survey.

### **Analysis**

Both quantitative and qualitative data were collected from the participants to evaluate the bundle's components. The responses were collected through Survey Monkey Online survey software that collected and tabulated responses to questions on either a four or five-point scale depending on the survey. The data were tabulated in the Survey Monkey software and exported to a spreadsheet for analysis in an aggregate method. Qualitative data were requested from all parties in the form of comments following each question and at the conclusion of the survey questionnaire. Additionally, the CNOs were asked to respond to

open-ended questions in the CNO questionnaire. Tabulated survey results are available in the appendices (see evaluation results in Appendices H, I, J and K).

## **Results**

### **Program Evaluation/Outcomes**

The settings spanned the USF CNL/MSN course N629 Financial Resource Management, the USF DNP course N764 Advanced Financial Management and three acute care hospital settings described in earlier. As noted earlier, the initial plan was to contribute to the educational preparation of the CNL by developing an education module for CNLs that could transfer to the practice setting. Through this development and feedback from CNOs, the aim grew from the education of the CNL and use of the CNL to apply evidence-based interventions to supporting the CNO's broader leadership and practice strategy to improve outcomes for quality, service, and economics. The improvement plan evolved over the course of an iterative PDSA cycle in the design of the educational module.

The change in improvement plan required the two main components of the project to be implemented sequentially. The education module was designed, delivered and evaluated iteratively, soliciting feedback through the evaluation survey after delivery in each setting. Modifications were suggested through each groups' rounds of feedback. The overall evaluation of the education module was measured at the 90% - 100% range of overall score out of a possible 100%. The average break down by group and topic was:

#### **Educational Module:**

- DNP students and faculty: 97.6%
- CNOs: 96.8%
- CNL/MSN students: 93.6%

**CNL Business Case:**

- CNOs: 98.4%

The break down of comment themes by group and topic was:

**Education Module:****DNP students and faculty:**

- Well done
- Excellent presentation
- Modify slide density
- HCAHPS focus on same challenge in responders hospital

**CNL/MSN students:**

- No comments

**CNOs:**

- Well done
- Like the interactive links to resources

**CNO Review of the CNL Business Case:**

- Well done
- Educational
- Need selling strategy – case for change
- ROI helpful for justification

Further improvements to the deliverables for consideration are an expansion of the educational module to include a more online links on the change process and EBP.

Improvements to the CNO case for change would be an educational and planning module for orientation and on-boarding processes to position the CNL for success. The CNO's use

of transformational leadership skills and strategies would lay the groundwork in the organization to integrate the CNL into the care delivery model.

## **Discussion**

### **Summary**

Key difficulties of implementation came midway through the project causing a shift in focus and expansion of the aim, content and deliverables. These changes required new directions in terms of the topics, deliverables, and consideration of the targeted participants. A key finding was that the CNOs wanted a business case that proposed integrating CNLs into their care delivery models. The addition of the CNL business case to the project objectives placed a higher than anticipated emphasis on the CNOs' input, validation and leadership requirements. The business case for the CNL pilot was met with a positive response from the CNOs.

The expanded intervention resulted in a method to facilitate CNLs' education and integration of the role into the hospital setting. Additionally, the expanded intervention will assist CNOs to increase performance on VBP and a host of other indicators. An education module for CNL students and CNOs to educate nursing staff about the key aspects of health reform and VBP are useful tools. The inclusion of videos and Internet links to strategies and tactical approaches to achieve VBP outcomes makes the education module appealing to younger students. The education module provides approaches to educate and communicate implications to the clinical nurse, and the point of care team. The content will increase understanding of the current healthcare economical forces and can engage the CNL in thinking about the their role in the clinical microsystem.

Transformational leaders create environments for innovation, foster continuous improvement and inquiry, support knowledge development and translate that knowledge into the practice setting White and Poe (2010). The second component of the bundle enables the CNO to articulate, position, justify, and lead a new care model that is evidenced to not only improve quality, safety, and patient satisfaction but also fund itself while improving the financial status of the hospital.

Although the employment changes of two of the three participating CNOs prior to their proposals for the CNL pilot in their organization limited the testing of the business case to one CNO and one hospital. A business case was put forward by the third CNO and plans are under consideration to include a pilot in the next fiscal year budget.

### **Relation to Other Evidence**

Evidence was sought to gain a full understanding regarding how the CNL role was being implemented across the country and the benefits to increasing quality and lowering costs. None of the hospitals participating in this project had implemented the CNL role or a similar scope under a different title. The main barrier expressed by the CNOs in this project was the need for an articulated value proposition that could be provided to an organization to fund such roles. With hospitals' focus on expenses to balance changing reimbursement, most of the indirect nursing roles have been eliminated.

It is important to discuss how to operationalize the CNL role in a setting where other advanced practice roles already exist. Questions often arise regarding the overlap of the roles of the Clinical Nurse Specialist (CNS) an advanced practice Registered Nurse (APRN) and the credentialed CNL. Harris, Stanley, and Rosseter (2011) explain that the CNL is neither an APRN nor in a managerial role. The CNS is a specialist with advanced

knowledge and expertise in a specialty area of clinical practice while the CNL focuses on care coordination, quality, and safety outside of a particular area of clinical practice. The CNS functions primarily at the mesosystem and macrosystem levels. The CNL practices primarily at the microsystem level of care in any type of health-care setting. The CNS focuses on issues across the system and supports the CNL in overseeing patient care and identifying gaps in staff expertise at the unit level (Harris, Stanley, & Rosseter, 2011).

### **Barriers to Implementation/Limitations**

The noted barriers to implementation of both the educational module by the CNL and the CNL pilot program are: (a) the degree to which the CNO is convinced of the intervention, (b) the strength of the evidence, (c) the confidence in the projected return on investment, and (d) the amount of power and influence the CNO enjoys within the organization. The educational module is limited in terms of the timeliness of the information. Information will require updating within one to two years as the actual VBP metrics and HCAHPS change or the benchmarks are modified by CMS.

Due to constraints in many hospitals' ability to implement the role as a supplement to the clinical nurse assignment, some considerations exist. Initially, the CNL role can be reserved for those patients whose complex course of care challenges the organization's quality, safety, and financial performance. Positioning the role as a focused interventionist will provide the opportunity to demonstrate the value in the most difficult intractable conditions thereby solidifying the role's value and future while making it more affordable.

### **Interpretation**

The post implementation evaluations for all components were very positive indicating that either the evaluation may not have captured depth of opportunities for

enhancement of the material or the content was on target and capitalized on early feedback about the materials. The lack of narrative responses from the CNL/MSN is difficult to interpret because the scores are still high. Students represented an acceptance of the material as helpful on the concepts. Real time feedback during class presentation was positive and prompted lively discussion. The scores were clustered at the high end of the scale averaging 4.5 on a 5-point scale. More divergence between the scores was expected. A broader range of responses was expected. Perhaps the material was ready for primetime use. The participants appreciated the content outline with the Internet links and were very complimentary about the presentation.

There was less enthusiasm about the PDSA Tune Up process. It could be used in a participative manner to design, test, and implement team supported interventions to address gaps in performance. This particular area needs more explanation and time or perhaps more examples or an actual video example of the process. The educational modules and materials are best delivered over a four hour period to allow adequate time to work through an example of the process with evidence- based change example.

## **Conclusions**

Based upon the response from the participants both components of the bundle were useful. The educational module alone has been and could be delivered in a lecture format in one-hour class aimed at both CNL/MSN students in the classroom setting and practicing nurse leaders, clinical nurses or other clinicians.

Although the content will require updating over time, the essence of the message will remain the same. Specifically, through the ACA and other reform initiatives, healthcare and hospitals will be reimbursed on a pay for performance basis and the point of care

practitioners will, in large part, influence the outcome of that pay and the financial viability of the organization. This major disruptive intervention to the industry is a “game changer”. Many healthcare leaders will need to shift in their relationship with nurses and providers who are now in powerful positions in the organizational dynamics. Hierarchical leadership styles will become less effective and more inspirational and collaborative management styles will prevail. The transformational CNOs will be recognized for their ability to plan, position, sell, and orchestrate complex organizational systems that produce economic value through high quality, safe, evidence-based care. They will lead organizations to successful performance with an educated and committed workforce. Organizations that have placed profit before patient quality or managed in a top down unilateral style will need to enlist and engage the employees in a partnership. Nurses will truly have the opportunity to change how care is delivered from the bedside. Improvements will flow from the microsystem to the mesosystem and macrosystem in a simultaneous, multidirectional, networked fashion.

### **Final Thoughts**

#### **Financial**

The cost benefit and return on investment of this project are illustrated in the sample scenario of the Sample Evidence-Based Business Case for a Clinical Nurse Leader Pilot in the appendices (see sample business case Appendix G). Education time and employment of CNLs in the hospital comprise the primary cost of the CNL pilot. The financial benefits and the ROI required for gaining support from a Chief Financial Officer are described in detail in the CNO business case noted above. The ROI ranges from breakeven to 8.6:1 based on a \$300,000 investment and expense over the course of a year. The program would at least self-fund at 100% in the worst-case scenario.



**Funding**

The costs to fund the implementation and evaluation of the project were budgeted at \$1,000.00 to cover general expenditures and travel expenses to deliver the class to the CNL students and meet with CNOs in person. The final costs were \$1,690.00 due to change in transportation costs and for additional meetings with CNOs. The author provided all funding. The participating organizations did not incur any additional cost to their operations. The final cost is outlined in (see project budget in Appendix L).

**Value**

The high value deliverable for this project is the articulation of a strong business case and ROI to support the implementation of the hospital-based CNL role. Although not an initial objective, it was developed after CNOs expressed the desire for an intervention to build a sustainable mechanism to provide high quality, safe patient care. The CNOs sought a method to achieve performance metrics, preserve quality and actually demonstrate improvement in practice that translated to financial, quality and satisfaction benefits.

It became clear that the business case could be of benefit to many CNOs and as it was packaged, could be marketed directly to CNOs through professional organizations and conferences. It is original in design, using evidence-based outcomes supported in the literature and demonstrating the financial and quality based benefits.

Increasing the value requires spreading the knowledge to other CNL faculty and to CNLs and CNOs in practice. The contents of the bundle will support leadership competence at all organizational levels from the clinical nurse to the executive level CNO. These resources and tools can be utilized for education in the practice setting or the classroom and as resources to augment university level nursing education module for healthcare, economic

and financial policy. To this end the components will be (a) packaged for presentation at professional meetings, (b) for sale as part of a consulting project, (c) incorporated into the CNL certification, or (d) provided to nurse leader organizations for their use in education or practice to improve care and hospital financial reimbursement.

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## Appendix A

## Evidence Rating Scales

Level I	Experimental study/randomized controlled trial (RCT) or meta analysis of RCT		
Level II	Quasi-experimental study		
Level III	Non-experimental study, qualitative study, or meta-synthesis.		
Level IV	Opinion of nationally recognized experts based on research evidence or expert consensus panel (systematic review, clinical practice guidelines)		
Level V	Opinion of individual expert based on non-research evidence. (Includes case studies; literature review; organizational experience e.g., quality improvement and financial data; clinical expertise, or personal experience)		
Level I	Experimental study/randomized controlled trial (RCT) or meta analysis of RCT		
Level II	Quasi-experimental study		
A	High	Research	Consistent results with sufficient sample size, adequate control, and definitive conclusions; consistent recommendations based on extensive literature review that includes thoughtful reference to scientific evidence.
		Summative reviews	Well-defined, reproducible search strategies; consistent results with sufficient numbers of well defined studies; criteria-based evaluation of overall scientific strength and quality of included studies; definitive conclusions.
		Organizational	Well-defined methods using a rigorous approach; consistent results with sufficient sample size; use of reliable and valid measures
		Expert Opinion	Expertise has been clearly evident
B	Good	Research	Reasonably consistent results, sufficient sample size, some control, with fairly definitive conclusions reasonably consistent recommendations based on fairly comprehensive literature review that includes some reference to scientific evidence.
		Summative reviews	Reasonably thorough and appropriate search; reasonably consistent results with sufficient numbers of well-defined studies; evaluation of strengths and limitations of included studies; fairly definitive conclusions.
		Organizational	Well-defined methods; reasonably consistent results with sufficient numbers; use of reliable and valid measures; reasonably consistent recommendations
		Expert Opinion	Expertise has been clearly evident
C	Low quality or major flaws	Research	Little evidence with inconsistent results, insufficient sample size, conclusions cannot be drawn undefined, poorly defined, or limited search strategies; insufficient evidence with inconsistent results; conclusions cannot be drawn.
		Summative reviews	Undefined, or poorly defined methods; insufficient sample size; inconsistent results; undefined, poorly defined or measures that lack adequate reliability or validity
		Organizational	adequate reliability or validity
		Expert Opinion	Expertise has been not discernable or has been dubious.
Newhouse R, Dearholt S, Poe S, Pugh LC, White K. Johns Hopkins Evidence – Based Practice Appraisal. The Johns Hopkins Hospital.			

Appendix B

Evidence Table: The Impact of the Clinical Nurse Leader

Author/ Article	Study Design (Validity/ Methods)	Study Results	Study Conclusions Pertinent Findings (Strength/limitations)	Relevance to Care (Significance)	Evidence Rating
Evidence Table: The Impact of the Clinical Nurse Leader					
<p>Bender, M., et al. (2012)</p> <p>Clinical Nurse Leader Impact on Microsystem Care Quality</p> <p><i>Nursing Research</i></p>	<p>Quasi-experimental</p> <p>A short interrupted time series design was used to measure patient satisfaction with multiple aspects of care 10 months before and 12 months after integration of the CNL role on a progressive care unit, compared with a control unit. Data were obtained from Press Ganey surveys, and analysis was completed using a publicly available program for</p>	<p>Clinical nurse leader implementation was correlated with significantly improved patient satisfaction with admission processes (r = + .63, p = .02) and nursing care (r =+ .75, p = .004), including skill level (r = .83, p = .003) and keeping patients informed (r = .70, p = .003). There was no significant correlation with improved patient satisfaction with physician care</p>	<p>The positive correlation between CNL-mediated collaborative care processes and improvements in patient satisfaction with care quality provides empirical evidence of outcomes achievable through CNL implementation. Research has been needed to explore the full range of achievable outcomes and to determine the specific processes by which these outcomes were realized. No RCT. Evidence has been limited to patient</p>	<p>The aim of this study was to assess the impact of CNL integration into an acute care microsystem on care quality, as measured by patient satisfaction with care.</p>	<p>Evidence Level: II</p> <p>Quality Rating: Good B</p>

Author/ Article	Study Design (Validity/ Methods)	Study Results	Study Conclusions Pertinent Findings (Strength/limitations)	Relevance to Care (Significance)	Evidence Rating
	short time series data streams.	(r = .31, p = .14) or discharge processes(r = .33, p = .23) post implementation. Control data showed no significant changes in patient satisfaction measures throughout the study time frame.	satisfaction.		
Bender, M., et al. (2011)  Leading transformation Implementing the Clinical Nurse Leader Role  <i>Journal of Nursing Administration</i>	Qualitative, descriptive Non experimental	Staff RNs were surveyed about satisfaction with the role, and the majority agreed that there was more support for patient care and care planning than before. Press Ganey scores measuring nurse-sensitive indicators demonstrated immediate,	During this pilot, the CNL role improved patient outcomes by creating a collaborative culture at the bedside with efficient use of resources. The role also supported career advancement opportunities for nursing staff that want to develop their bedside careers. Limitations: It was important to continue to	This article describes how a progressive care unit (PCU) redesigned its care delivery system to implement the CNL role, using Katter's Eight Change Phases model as a guide.	Evidence Level: III  Quality Rating: Good B

Author/ Article	Study Design (Validity/ Methods)	Study Results	Study Conclusions Pertinent Findings (Strength/limitations)	Relevance to Care (Significance)	Evidence Rating
		significant, and sustained increases throughout the one-year pilot.	develop and monitor additional outcome data to further support the CNL role. During this pilot, the CNL role improved patient outcomes by creating a collaborative culture at the bedside with efficient use of resources. The role also supported career advancement opportunities for nursing staff who want to develop their bedside careers		
Bombard, et al. (2010). Answering the question, "what is a clinical nurse leader?" a transition experience of four direct-entry master's students.  <i>Journal of Professional</i>	A first hand action research project analyzing the transition of direct-entry master's students to the role of clinical nurse leader (CNL).	Experiences of one of the first cohorts of direct-entry master's in nursing (DEMNs) students to graduate from the CNL program to sit for the CNL certification examination.	Despite skepticism from educators, nurse leaders, and staff nurses in local and national health care institutions students from DEMN programs met the competencies required for the CNL role given	Understanding this experience may benefit future DEMN students in managing the challenges associated with learning a clinical role that is in evolution	Evidence Level: V  Quality Rating: Good B

Author/ Article	Study Design (Validity/ Methods)	Study Results	Study Conclusions Pertinent Findings (Strength/limitations)	Relevance to Care (Significance)	Evidence Rating
<i>Nursing</i>			their lack of clinical experience and accelerated program pace	and assisting faculty, preceptors, and staff to develop more effective ways to guide them.	
Kennedy, F. et al. (2011)  Evaluation of the impact of nurse consultant roles in the United Kingdom: a mixed method systematic literature review  <i>Journal Of Advanced Nursing</i>	A broad search strategy was adapted for eight databases. Grey literature was sought from various sources. Quantitative and qualitative studies were included. Study quality was assessed using appropriate instruments. Cross-study synthesis combined the quantitative and qualitative findings in relation to the dimensions of impact identified.	Thirty-six studies were included. The findings suggest a largely positive influence of nurse consultants on a range of clinical and professional outcomes, which map onto the proposed framework of impact. However, there was very little robust evidence and the methodological quality of studies was often weak.	Further robust research is required to explore nurse consultants' impact on patient and professional outcomes. The proposed framework for assessing impact could be used to guide future research and assist nurse consultants assess their impact. Quantitative studies were weak lacking RCT designs. Qualitative studies quality was moderate.	This paper reports a mixed methods systematic review examining the impact of nurse consultant roles in adult healthcare settings, with a view to identifying indicators for demonstrating their impact on patient and professional outcomes. Background. Nurse consultants were introduced in England in 2000 with the intention to achieve better	Evidence Level: I  Quality Rating: High A

Author/ Article	Study Design (Validity/ Methods)	Study Results	Study Conclusions Pertinent Findings (Strength/limitations)	Relevance to Care (Significance)	Evidence Rating
	Measures of impact were mapped against a framework for assessing clinical and professional outcomes.			outcomes for patients by improving quality and services.	
<p>Kitson, A., et al. (2011)</p> <p>Clinical nursing leaders, team members and service managers, experiences of implementing evidence at a local level</p> <p><i>Journal of Nursing Management</i></p>	<p>Qualitative descriptive study focused on the implementation and optimization of the CNL role</p> <p>The study focused on three key groups: the clinical nursing leaders, the members of the seven project teams and the service managers</p>	<p>Managers need to provide structured support around the six core elements –selecting the topic for improvement, ensuring appropriate skills and knowledge, working on extending the power and autonomy of the local leaders and providing the psychologically safe space in which to do this, supporting the sustaining and spread of the innovation and ensuring effective</p>	<p>the need for more systematic studies into leadership for improvement at the local level beginning with a systematic review of the literature. Need to understand the role of the manager in facilitating initiatives and, in particular, how to create an environment in which local leaders feel safe to experiment and innovate.</p>	<p>This study identified the importance of the leadership support for the improvement role of the clinical nurse leader and the need for greater support provided in a more liberated way, by managers within the system. The clinical nursing leader's experiences of being involved in a structured implementation program were Important</p>	<p>Evidence Level: III</p> <p>Quality Rating: Good B</p>



Author/ Article	Study Design (Validity/ Methods)	Study Results	Study Conclusions Pertinent Findings (Strength/limitations)	Relevance to Care (Significance)	Evidence Rating
		integration of the local initiative with the broader strategic goals of the organization.			
<p>Moore, L. M., &amp; Leahy, C. (2012).</p> <p>Original article: Implementing the new clinical nurse leader role while gleaning insights from the past.</p> <p><i>Journal of Professional Nursing</i></p>	<p>This qualitative study explored experiences of CNLs as they implemented this new role. Twenty-four CNLs participated. Data were collected via an e-mail-distributed questionnaire. Data from open-ended questions were used to conduct a qualitative content analysis. Data were categorized according to question, key thoughts and phrases were established, and themes were determined.</p>	<p>Findings revealed that nonsystematic role introduction was common. Two challenges to role implementation included role confusion and being overworked.</p>	<p>The most positive aspect of the role was remaining close to the point of care. Participants noted that the overall response of the health care team to the role was positive. However, participants' expressed belief that the greatest roadblock to role success was the lack of support by nurse administrators. The support of nurse administrators and clear role expectations were viewed as essential for role sustain-ability.</p>	<p>Planned and systematic introduction and support from the nurse administrator (CNO) was critical to the CNL's success. The introduction must be weighed when considering this intervention. The ROI on quality and related outcomes requires strong and rapid evaluation to reinforce the value of the role as it is settling within an organization.</p>	<p>Evidence Level: III</p> <p>Quality Rating: B</p>
<p>Ott, K.M. et al. (2009)</p> <p>The Clinical Nurse Leader:</p>	<p>Non-Experimental, qualitative descriptive, retrospective</p>	<p>The data suggest that the CNL role positively affected the</p>	<p>The challenges encountered in evaluating initial outcomes have clearly</p>	<p>This article describes the impact the CNL has on care across a</p>	<p>Evidence Level: III</p> <p>Quality Rating:</p>

Author/ Article	Study Design (Validity/ Methods)	Study Results	Study Conclusions Pertinent Findings (Strength/limitations)	Relevance to Care (Significance)	Evidence Rating
<p>Impact On Practice Outcomes in the Veterans Health Administration</p> <p><i>Nursing Economics</i></p>	<p>study. Impact data were collected on 10 indicators and assimilated from seven Veterans Administration Medical Centers to support how CNLs impact the delivery of quality and safe patient care and how practice changes could be sustained. The CNL initiative began as a pilot project in 2004 at 50 Veterans Affairs Medical Center sites. In early 2008, impact data were collected and assimilated from seven VAMCs to support how CNLs impact the delivery of quality and</p>	<p>RN hours per patient day. Reduction in GI case cancellations, sitter usage, pressure ulcers and VAP. Increase in restorative dining, discharge teaching compliance, patient satisfaction, and innovation</p>	<p>validated a need for a single, unique tool or method of data collection that provides consistent definitions for outcome measurements. Data must be gathered at all points of care where CNLs practice. Integration of the CNL role in all areas of practice in every care setting has the promise of stream lining coordination of care for veterans across all spectrums in the provision of care. In addition, documenting CNL outcomes in the VA Nursing Outcomes Database a standardized, automated nursing-sensitive</p>	<p>number of key areas in fulfillment of the intended value of the role. Quality outcomes increase, financial savings, increases in satisfaction.</p>	<p>High A</p>

Author/ Article	Study Design (Validity/ Methods)	Study Results	Study Conclusions Pertinent Findings (Strength/limitations)	Relevance to Care (Significance)	Evidence Rating
	safe patient care and how practice changes could be sustained. In this article, the introduction of the CNL role in a multisite health care system, development of a CNL evaluation process and analysis of impact data was described.		database, is an imperative requisite to communicate the utility of the CNL role across settings and support evidence-based practice.		
Reid, K. B., et al. (2011)  The Clinical Nurse Leader: Point-of-Care Safety Clinician.  <i>Journal of Issues in Nursing</i>	Qualitative descriptive Representing the opinion of nationally recognized experts based on systematic review	Systematic review describing the benefits and impact of the CNL and student CNL in the clinical microsystem, and point of care	The CNL is a clinician who brings the locus of control for safe and quality care from the administrative areas straight to the unit's providers who deliver the services. The role of CNL restores this vital connection. The CNL is a clinician who brings the locus of control for	Describes how the CNL enhances safety across diverse settings and conclude by noting the power that CNLs have for building continuing coalitions of safety. The value of the CNL as a front-line care leader for building	Evidence Level: III  Quality Rating: Low C

Author/ Article	Study Design (Validity/ Methods)	Study Results	Study Conclusions Pertinent Findings (Strength/limitations)	Relevance to Care (Significance)	Evidence Rating
			safe and quality care from the administrative areas straight to the unit's providers who deliver the services.	and sustaining safer and higher quality care delivery environments for the future are highlighted.	
<p>Sherman, R. (2008). Factors influencing organizational participation in the clinical nurse leader project <i>Nursing Economics</i></p>	<p>A grounded theory methodological approach was used to explore why CNOs involved their organizations in the Clinical Nurse Leader project. The investigator conducted semi-structured interviews using eight open-ended questions. 25 CNOs were interviewed. The interviews were transcribed and evaluated. The themes and concepts that emerged</p>	<p>Five major factors were identified from the research to form a framework designed to explain organizational participation: organizational needs, a desire to improve patient care, an opportunity to redesign care delivery, the promotion of the professional development of nursing staff, and the potential to enhance physician-nurse relationships.</p>	<p>The sample size of CNOs interviewed for this study was small and limited to one geographic area. Perceptions about the CNL role nursing staff. As the CNL pilot projects continue, the ultimate success of the CNL role will depend on what value this role adds to patient care and to the organizations that implements it.</p>	<p>The impact of the CNL role within an organization affects the willingness of the organization to implement the role</p>	<p>Evidence Level: III Quality Rating: High A</p>

Author/ Article	Study Design (Validity/ Methods)	Study Results	Study Conclusions Pertinent Findings (Strength/limitations)	Relevance to Care (Significance)	Evidence Rating
	<p>from the data were coded into categories that formed an explanatory framework for organizational involvement.</p>				
<p>Spetz, J., Brown, D.S., Aydin, C., &amp; Donaldson, N. (2014).  The value of reducing hospital-acquired pressure ulcer prevalence: An illustrative analysis.  <i>Journal of Nursing Administration</i></p>	<p>The aim of this study was to assess the cost savings associated with implementing nursing approaches to prevent hospital-acquired pressure ulcers (HAPU).</p>	<p>A return-on-investment (ROI) framework and AHRQ Quality Indicators Toolkit was used for this study. The researchers identified achievable improvements in HAPU rates from data from the Collaborative Alliance for Nursing Outcomes and measured costs and savings associated with HAPU reduction from published literature.</p>	<p>Hospital-acquired pressure ulcer surveillance and prevention can be cost saving for hospitals and should be considered by nurse executives as a strategy to support quality outcomes.</p>	<p>Hospitals face substantial costs associated with the treatment of HAPUs. And other quality conditions. Effective interventions can be quantified for an ROI.</p>	<p>Evidence Level: V  Quality Rating: Good B</p>

Author/ Article	Study Design (Validity/ Methods)	Study Results	Study Conclusions Pertinent Findings (Strength/limitations)	Relevance to Care (Significance)	Evidence Rating
<p>Stanley, J.M., et al. (2008)</p> <p>The clinical nurse leader: a catalyst for improving quality and patient safety</p> <p><i>Journal of Nursing Management</i></p>	<p>A non-experimental evaluation design was used to track outcome indicators on a model unit. A naturalistic approach was used to evaluate the impact the CNL had on outcomes of care. Responses of stakeholders in a health system and case studies describe the CNL implementation experiences at three different practice settings within the same geographic region. The CNL's impact on outcomes was compared with an external set of requirements or with what is considered</p>	<p>Cost savings, including improvement on core measures, was realized quickly in settings where the CNL role has been integrated into the care delivery model.</p>	<p>The CNL role provides an opportunity for nursing to lead innovation by maximizing health care quality while minimizing costs. The 3-month post-CNL residency values measure the time period that the CNL student was on the unit for the clinical immersion experience. Data points continued to be provided through the last quarter of 2007 and through January. Findings from 3 separate case studies were positive in all domains evaluated over time. The experiences of these three settings demonstrate significant cost savings in very short periods of</p>	<p>This paper describes the CNL's potential impact in practice. Implications for nursing in collaboration with multiple practice partners, to lead the implement quality improvement and patient safety initiatives across all health care settings. The intent of the CNL Evaluation Plan was to learn more about what CNLs do and their impact on patient outcomes in diverse health care units and with different patient populations.</p>	<p>Evidence Level: III</p> <p>Quality Rating: Good B</p>

Author/ Article	Study Design (Validity/ Methods)	Study Results	Study Conclusions Pertinent Findings (Strength/limitations)	Relevance to Care (Significance)	Evidence Rating
	<p>desirable by the identified stakeholders or in this case, the national patient safety goals. Monthly data from patient satisfaction survey, length of stay data extracted from a monthly report provided to the nurse manager, and fall data manually extracted from incident reports and the patient safety and quality department. Retrospective data, prior to student's practice on the unit, from as far back as a year, also were evaluated.</p>		<p>time. Further study is required to correlate the data for significance.</p>		

Author/ Article	Study Design (Validity/ Methods)	Study Results	Study Conclusions Pertinent Findings (Strength/limitations)	Relevance to Care (Significance)	Evidence Rating
<p>Stavriannopoulos, T. (2012).</p> <p>The clinical nurse leader</p> <p><i>Health Science Journal</i></p>	<p>A literature review of twenty-five articles that were deemed absolutely on the subject.</p>	<p>General review of the role based on literature. Reviewed all aspects of the CNL role in the literature.</p>	<p>Limited new information and did not include qualitative or quantitative data to support the role as found in the literature.</p>	<p>The aim of the present study was review the literature about the role of Clinical Nurse Leader</p>	<p>Evidence Level: III</p> <p>Quality Rating: Low C</p>
<p>Tachibana, C., &amp; Nelson-Peterson, D. (2007).</p> <p>Implementing the clinical nurse leader role using the virginia mason production system</p> <p><i>Journal of Nursing Administration</i></p>	<p>Case study on the implementation of the CNL role using a Toyota Production System quality improvement system to roll out the implementation. Patient population were the ELOS patients whose LOS was &gt; 6 days. The patients had complex care coordination needs that frontline nursing staff did not have time to</p>	<p>6 months post implementation of the CNL role, the organization saw a 7% drop in overall length of stay. It is believed that the CNLs have influenced the overall length of stay with their focus on ELOS patients and assistance in coordinating their care needs, mobilizing ancillary services, and facilitating multidisciplinary rounds. VM felt the</p>	<p>Several challenges during implementation phase. One of the more significant challenges has been on assuring that all patients who could benefit from the involvement of the CNL have access to their services. The VM implementation of the CNL role successfully addressed the gap that existed in assuring that patients with complex care needs receive the consistency and continuity of care from a</p>	<p>The vision was to have a highly skilled nurse who could partner with the entire care team to assist in coordinating, planning, and directing complex patients' plans of care, provide additional resources and expertise to the staff, and ensure safe handoffs between all providers. An awareness of the risks associated with the introduction</p>	<p>Evidence Level: IV</p> <p>Quality Rating: High A</p>



Author/ Article	Study Design (Validity/ Methods)	Study Results	Study Conclusions Pertinent Findings (Strength/limitations)	Relevance to Care (Significance)	Evidence Rating
	address.	most successful outcome was in the patients' care experience based on anecdotal feedback from patients and families.	nurse educated at the graduate level who can articulate the plan of care across shifts and disciplines, improve patient outcomes and satisfaction, and provide resources and expertise to both patients and staff.	of the CNL role, including added expenses and possible alienation of other care team members, was understood.	
<p>Wilson et al. (2013).</p> <p>Evolution of an innovative role: the clinical nurse leader</p> <p><i>Journal of Nursing Management</i></p>	<p>Qualitative descriptive study of a single hospital CNL Cohort between 2007 and 2012 using pre and post intervention data on quality and financial measures. A cohort of CNLs in practice has evaluated the effectiveness of the role with measures of clinical outcomes, financial</p>	<p>Reduced lengths of stay readmission rates and improved patient outcomes related to nursing care spanning the continuum from patients admitted for a specific procedure to entire populations. Prevention savings \$110K CAUTI \$183K HAPU \$500K HLOC in ped.pts.</p>	<p>Having CNLs with a strategic perspective acting as facilitators and integrators of care has proven invaluable. Leadership support has been critical and commitment to maintaining the integrity of the role has ensured its success and sustainability. This role has established its value in risk assessment, strategic quality improvement, interdisciplinary collaboration</p>	<p>Documented cost savings in excess of \$2.5 million demonstrate CNLs attention to fiscal stewardship. This study describes the evolution of the CNL role and its utility in a tertiary care and community hospital. Often the CNLs employed evidence-based knowledge and best practices</p>	<p>Evidence Level: III</p> <p>Quality Rating: A</p>

Author/ Article	Study Design (Validity/ Methods)	Study Results	Study Conclusions Pertinent Findings (Strength/limitations)	Relevance to Care (Significance)	Evidence Rating
	savings and case studies.		and the implementation of evidence-based solutions. Implications for nursing management. The flexibility and broad scope of role allows for its use across practice settings and represents an exciting opportunity for nursing to drive quality of care to new levels while managing costs.	while exploring solutions with the healthcare team. Their innovative approaches support the delivery of high quality cost efficient care.	

Appendix C

Evidence Table: Transformational Leadership

Author/ Article	Study Design (Validity/ Methods)	Study Results	Study Conclusions Pertinent Findings (Strength/limitations)	Relevance to Care (Significance)	Evidence Rating
Evidence Table: The Impact of the Clinical Nurse Leader					
<p>Bass, B. M., &amp; Avolio, B. J. (1993). Transformational leadership and organizational culture.</p> <p><i>Public Administration Quarterly,</i></p>	<p>Transformational leaders change their organization's culture by first understanding it and then realigning the organization's culture with a new vision and a revision of its shared assumption, valued and norms.</p>	<p>Transformational leaders have been characterized by 4 separate components: 1. idealized influence, 2. inspirational motivation, 3. intellectual stimulation, and 4. individualized consideration.</p>	<p>Organizations are likely to have cultures that are characterized by 2 types of leadership: transformational and transactional and should move in the direction of more transformational qualities in their cultures while also maintaining a base of effective transactional qualities.</p>	<p>Authors present an assessment tool for determining an agency's culture in terms of the leadership and its affects found within the culture. The Organizational Description Questionnaire</p>	<p>Level IV B Good</p>
<p>Bass, B. M., Jung, D. I., Avolio, B. J., &amp; Berson, Y. (2003).</p> <p>Predicting unit performance by assessing transformationa</p>	<p>Calculated the predictive relationships for the transformational and transactional leadership of 72 light</p>	<p>How do leadership ratings collected from units operating under stable conditions predict subsequent</p>	<p>Both transformational and transactional contingent reward leadership ratings positively predicted unit</p>	<p>Contemporary organizations are in the midst of accelerated pace of change requiring highly</p>	<p>Level II A high</p>

Author/ Article	Study Design (Validity/ Methods)	Study Results	Study Conclusions Pertinent Findings (Strength/limitations)	Relevance to Care (Significance)	Evidence Rating
<p>I and transactional leadership.</p> <p><i>Journal of Applied Psychology</i></p>	<p>infantry rifle platoon leaders for ratings of unit potency, cohesion, and performance for U.S. Army platoons participating in combat simulation exercises.</p>	<p>performance of those units operating under high stress and uncertainty</p>	<p>performance. The relationship of platoon leadership to performance was partially mediated through the unit's level of potency and cohesion. Implications, limitations, and future directions for leadership.</p>	<p>flexible and adaptive or transformational leadership style</p> <p>The rapidly changing environments of healthcare organizations calls for an adaptive leader who can first understand and in turn interpret changes to followers and generate creative solutions while developing the followers leadership capabilities</p>	
<p>Bass, B.M. &amp; Riggio, R.E. (2006).</p> <p><i>Transformational leadership</i>. 2nd ed.</p>	<p>Transformational leadership described</p>	<p>Assumptions of effectiveness</p>	<p>Varied</p>	<p>Informational basis for later studies and application</p>	<p>Level IV</p> <p>C Low</p>
<p>Clavelle et al. (2012)</p> <p>Transformational leadership practices of chief nursing officers in magnet®</p>	<p>E-mail surveys of 384 Magnet CNOs were conducted in 2011 using the leadership practices</p>	<p>CNOs 60 years or older and those with doctorate degrees scored significantly higher in</p>	<p>As CNOs gain experience and education, they exhibit more transformational leadership characteristics. Magnet organizations</p>	<p>Transformational leadership practices influence quality and are integral to Magnet designation.</p>	<p>Level III</p> <p>B Good</p>

Author/ Article	Study Design (Validity/ Methods)	Study Results	Study Conclusions Pertinent Findings (Strength/limitations)	Relevance to Care (Significance)	Evidence Rating
<p>organizations</p> <p><i>Journal of Nursing Administration</i></p>	<p>inventory (LPI).</p>	<p>inspiring a shared vision and challenging the process.</p>	<p>should take steps to retain CNOs and support their development and advancement</p>		
<p>Spicer et al., (2011). Importance of role competencies for Chinese directors of nursing based on the forces of magnetism.</p> <p><i>Journal of Nursing Management</i></p>	<p>Randomized sample of 300 Chinese DONs and COOs was surveyed in the 2008.</p>	<p>Compared with the COOs, the DONs were predominately female, had less graduate education and had more years of experience in their current role. Both groups perceived structural empowerment to be important, the DONs placed significantly greater importance on transformational leadership.</p>	<p>Conclusion The Chinese DONs and COOs rated the role competencies based on the Forces of Magnetism to be important for DONs to be effective. Findings support the transferability of the Forces of Magnetism to nursing management in hospitals internationally .</p>	<p>The aim was transferability of the forces of magnetism including transformational leadership</p>	<p>Level IIL</p> <p>A high</p>
<p>Yuki, G. (2012). Effective leadership behavior: What we know and</p>	<p>Systematic review to describe what has been learned</p>	<p>A hierarchical taxonomy of four meta-categories</p>	<p>Limitations and potential extensions of the hierarchical taxonomy are</p>	<p>Extensive research on leadership behavior during the</p>	<p>Level 1</p> <p>A High</p>

Author/ Article	Study Design (Validity/ Methods)	Study Results	Study Conclusions Pertinent Findings (Strength/limitations)	Relevance to Care (Significance)	Evidence Rating
<p>what questions need more attention.</p> <p><i>Academy of Management Perspectives</i></p>	<p>about effective leadership behavior in organizations.</p>	<p>and 15 specific component behaviors was used to interpret conditions that influence the effectiveness of these behaviors.</p>	<p>discussed, and suggestions for improving research on effective leadership behavior are provided.</p>	<p>past half century has yielded many different behavior taxonomies and a lack of clear results about effective behaviors.</p>	

*Appendix D*

## USF Institutional Review Board Exemption

Development and implementation of an evidence-based toolkit to increase the performance improvement on quality measures defined by Value Based Purchasing.

<b>Application ID</b>	93
<b>PI</b>	Leanne Hunstock
<b>PI Type</b>	Student
<b>Advisor</b>	KT Waxman
<b>Advisor Acceptance</b>	Accepted
<b>Status</b>	
<b>Department</b>	
<b>Submitted By</b>	Leanne Hunstock
<b>Co-PI's</b>	
<b>External P.I.'s</b>	
<b>Approval Status</b>	Quality Improvement Verified
<b>Date Received</b>	05/09/2013
<b>Date of Completion</b>	07/17/2013
<b>Date Approved</b>	07/17/2013
<b>Proposed Start Date</b>	06/03/2013
<b>End Date</b>	11/29/2013
<b>Date Closed</b>	
<b>Funding Source</b>	
<b>IRB Review Fee</b>	
<b>Grant Number</b>	
<b>Consent Waived</b>	Not Requested
<b>Waiver of Documentation of Informed Consent</b>	Not Requested
<b>Application</b>	05/09/2013 IRB Application for Exempt Research.Hunstock.doc <b>Pre-Application Questionnaire</b> 05/09/2013 Pre-Protocol Questionnaire.pdf
<b>Additional Documentation</b>	05/09/2013 IRB Application for Quality Improvement Project hunstock 2.doc
<b>Notifications</b>	07/17/2013 Quality Improvement Verified.pdf
<b>Renewals</b>	
<b>Modifications</b>	
<b>Adverse Events</b>	

*Appendix D*

## USF Institutional Review Board Exemption (continued)

Event/Date	Status/Deviation/File/Comments/Submitted By
No Protocol Deviations Found	

**DSMB Reports**

Report / Date	Status / Comments / Files/Submitted By
No DSMB Reports Found.	

**Reviewer Comments****Messages**

05/10/2013 7:58 AM PDT by Christy Lusareta

Dear Professor Waxman,

We have received a request from Leanne Hunstock to review their IRB Application, but we cannot proceed until you have approved this study.

You should have received an email requesting you to log into the AxiomMentor system to review this applicant's protocol. Once you are logged in, go to the Students page on the IRB tab where you will find your student protocols. You can review the protocol and documents submitted with it. Once you approve the protocol, click on the "Faculty Advisor Action" button. On the resulting form, you can "Accept" or "Reject" the protocol.

[www.axiommentor.com](http://www.axiommentor.com)

Please let me know if you are having any issues with logging in. Once you approve Leanne's protocol, we will proceed with the review.

Thank you,

Christy Lusareta  
IRBPHS Coordinator



*Appendix E*

## VBP Educational Class

## Class Objectives

At the completion of this class the student will be able to:

1. Understand Medicare Reform Payments as a result of the ACA and the impact of VBP on hospital financial resources.
2. Understand the Tune-up Approach to improving performance at the microsystem level.
3. Compare performance between home hospital and market competitors.
4. Plan an evidence based intervention or best practice for low performing metrics.
5. Describe potential strategies within the CNL/MSN's role that generate savings and revenues in nursing microsystems.

<b>Activity</b>	<b>Time</b>	<b>Objective</b>
Introductions Overview of class	15 minutes	Informational
Appendix C		Appendix C
Presentation ACA Medicare Payment reforms  Activity 1. Icebreaker Eggstravaganza  Improvement at the Microsystem level Value Based Purchasing / HCAHPS	60 minutes	1. Understand Medicare Reform Payments as a result of the ACA and the impact of VBP on hospital financial resources.  2. Understand the Tune-up Approach to improving performance at the microsystem level.
Profile your hospital against 1-2 hospitals in your market on the domains of the Patient Experience (HCAHPS) and Process of Care Indicators (Core Measures)	60-90 minutes: Approximately 30 -45 minutes for each activity	3. Compare performance between home hospital and market competitors  4. Identify/Plan an evidence - based intervention for low performing metrics (one for HCAHPS and one for a Process of Care indicator). See Activity 2
Debrief	TBD	

*Appendix E*

## VBP Educational Class (continued)

**Activity 2**

HospitalCompare.org provides information on the data sources and methodology for the quality measures posted on Hospital Compare.

- Survey of Patients' Hospital Experiences HCAHPS (Hospital Consumer Assessment of Healthcare Providers and Systems)
- Timely and Effective Care (Process of Care Measures)
  - Heart Attack (Acute myocardial infarction (AMI))
  - Heart Failure
  - Pneumonia
  - Surgery (Surgical Care Improvement Project)
  - Emergency Department Care
  - Preventive Care
  - Children's Asthma Care
- Readmissions, Complications, and Deaths (Outcome of Care Measures)
  - 30-day death (mortality) rates and 30-day readmission rates
  - Serious complications - AHRQ Patient Safety Indicators (PSIs)
  - Hospital-acquired conditions
  - Healthcare-associated infections
- Use of Medical Imaging (Outpatient Imaging Efficiency Measures)
- Number of Medicare patients
- Spending per hospital patient with Medicare

*Appendix E*

## VBP Educational Class (continued)

## Instructions:

Go to

1. [http://www.medicare.gov/hospitalcompare/\(S\(hx4hw4q43nk0tsodsclljboz\)\)](http://www.medicare.gov/hospitalcompare/(S(hx4hw4q43nk0tsodsclljboz)))/search.as

px

2. Identify your city and search hospitals. It will come up in list.
3. Select 3 hospitals to compare in either a graphical OR table format. (see example)
4. For graph: go into each tab and select graph.
5. For Table: Print all tabs for a table format.
6. Save output to PDF on your hard drive or desk top
7. From your organization:
  - Select 1-2 lower performing HCAHPS measures and 1-2 lower performing quality measures from yours or another hospital
  - Identify an evidence based intervention or best practice to improve the performance.
  - Rate 1-2 interventions according to the prioritization matrix in the presentation
  - (rate intervention in terms of High = 3 Medium= 2 Low =1 impact on performance and ability to implement)

*Appendix E*

VBP Educational Class (continued)

Intervention/ Best Practice	Impact on Performance	Ability of to implement in 100 days
HCAHPS	High = 3, Medium = 2, Low = 1	
QUALITY	High = 3, Medium = 2, Low = 1	

We will share with the class.

Included in your packet are some suggested resources to get you started

AHRQ: (Agency for Healthcare Research and Quality)

AHRQ Index of topics: <http://www.ahrq.gov/health-care-information/index.html>

Guidelines & Recommendations. September 2012. Agency for Healthcare Research and Quality, Rockville, MD. <http://www.ahrq.gov/professionals/clinicians-providers/guidelines-recommendations/index.html>

AHRQ Quality Indicators™ Toolkit for Hospitals: Fact Sheet: Fact Sheet. June 2012.

Agency for Healthcare Research and Quality, Rockville, MD.

Re-Engineered Discharge (RED) Toolkit. March 2013. Agency for Healthcare Research and Quality, Rockville, MD.

<http://www.ahrq.gov/professionals/systems/hospital/toolkit/index.html>

*Appendix E*

## VBP Educational Class (continued)

**HCAHPS Best Practice Resources:**

The Studer Group

[http://www.studergroup.com/books/hcahps/hcahpshandbook\\_chaptertools.dot?host\\_id=1](http://www.studergroup.com/books/hcahps/hcahpshandbook_chaptertools.dot?host_id=1)

[https://www.studergroup.com/tools\\_andknowledge/tool\\_kits/index.dot](https://www.studergroup.com/tools_andknowledge/tool_kits/index.dot)

<http://www.studergroup.com/hcahps/index.dot>

[http://www.studergroup.com/hcahps/vbp\\_series/index.dot](http://www.studergroup.com/hcahps/vbp_series/index.dot)

The Beryl Institute

<http://www.theberylinstitute.org>

*Appendix F*

## VBP Educational Module



## ACA Medicare Payment Reforms for Hospitals

Leanne Hunstock DNPc, MA, MBA, RN NEA-BC

### Reimbursement Programs Focused on Quality

- Value Based Purchasing (VBP)
  - 1-2 % reduction in DRG total Medicare payment
  - Incentive payments made based on improved results
  - For 2013, includes acute myocardial infarction, heart failure, pneumonia, surgeries, and healthcare associated infections
- Hospital Readmissions Reduction Program
  - 1% payment reduction in 2012 for hospitals based upon a ratio of preventable readmissions to all discharges, progressing to 2% in 2014 and 3% in 2015
- Hospital Acquired Conditions (HAC)
  - 1% reduction in payment for hospitals in the top 25th percentile of rates of hospital-acquired conditions starting in 2015
  - As of 2008 HAC's no longer "count" toward a higher paying DRG
- Healthcare Associated Infections (HAI)
  - No separate program (yet), but SSI, CAUTI and CLABSI are on the HAC list. More are sure to be added

Leanne Hunstock DNPc, MA, MBA, RN NEA-BC

### Other Reform Initiatives

- Shared Savings programs
  - Accountable Care Organizations (ACO)
- Bundled payment demonstration program
- Gainsharing - OIG indicating more flexibility in issuing approvals
- Joint Commission (TJC) deemed accreditation
- Medicare Condition of Participation (CoP) compliance



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Appendix F


VBP Educational Module (continued)

## Value Based Purchasing

- FY 2013 1% of each hospital’s (DRG) Medicare payments are taken back and redistributed as incentive payments
  - 2 ways to earn incentives
    - Improvement against past hospital performance
      - Baseline: Hospital performance for all 20 metrics during the baseline period
      - Performance: Hospital performance for all 20 metrics during the performance period
    - Achievement against performance of other CMS hospitals
      - Benchmark: Mean of top decile performance (95th percentile) nationally
      - Threshold: 50th percentile performance nationally
      - Floor (HCAHPS only!): Minimum performance nationally
  - CMS anticipates that hospitals’ P4P will range from 0.0236% to 1.817% of Medicare revenues\*
    - \*1% P4P gets you back to where you were before the 1% reduction

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## VBP Measures – FY 2013

<b>HCAHPS</b> 30%	+	<b>Core Measures</b> 70%	<b>Core Measures or Clinical Process of Care</b>
			<b>Acute Myocardial Infarction</b> Fibrinolytic Therapy Received within 30 mins. of Hospital Arrival Primary PCI Received within 90 mins. of Hospital Arrival
<b>HCAHPS</b>			<b>Congestive Heart Failure</b> Discharge instructions received
Patient Experience Nurse Communication Doctor Communication Hospital Staff Responsiveness Pain Management/Control Medication Communication Hospital Cleanliness and Quietness Discharge Information Overall Hospital Rating			<b>Pneumonia</b> Initial antibiotic selection for CAP in Immunocompetent patients Blood cultures before first antibiotic in ED
			<b>Healthcare Associated Infection (SCIP)</b> Prophylactic antibiotic given 1 hour prior to incision Appropriate antibiotic selection for Surgical Patients Prophylactic antibiotic discontinued within 24 hours of surgery Cardiac patients with Controlled 6 a.m. Postop. Serum Glucose
			<b>Surgical Infection Indicators</b> Beta blocker prior to admission and periop Recommended VTE Prophylaxis ordered Appropriate VTE Prophylaxis timing

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## Hospital Acquired Conditions (HAC)

- ▶ Surgical Site Infection, Mediastinitis, Following Coronary Artery Bypass Graft (CABG):
- ▶ Surgical Site Infection Following Bariatric Surgery for Obesity
  - Laparoscopic Gastric Bypass, Gastroenterostomy
  - Laparoscopic Gastric Restrictive Surgery
- ▶ Surgical Site Infection Following Certain Orthopedic Procedures
  - Spine, Neck, Shoulder, Elbow
- ▶ Surgical Site Infection Following Cardiac Implantable Electronic Device (CIED) - **NEW**
- ▶ Deep Vein Thrombosis (DVT)/Pulmonary Embolism (PE) Following Certain Orthopedic Procedures:
  - Total Knee Replacement, Hip Replacement
- ▶ Latrogenic Pneumothorax with Venous Catheterization

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Inpatient Prospective Payment System (IPPS) FY 2013 Final Rule; <http://www.cms.gov/>

Appendix F

VBP Educational Module (continued)

### Hospital Acquired Conditions (HAC)

- ▶ Foreign Object Retained After Surgery
- ▶ Air Embolism
- ▶ Blood Incompatibility
- ▶ Stage III and IV Pressure Ulcers
- ▶ Falls and Trauma
  - Fractures, Dislocations
  - Intracranial Injuries, Crushing Injuries
  - Burn, Other Injuries
- ▶ Manifestations of Poor Glycemic Control
  - Diabetic Ketoacidosis, Nonketotic Hyperosmolar Coma
  - Hypoglycemic Coma, Secondary Diabetes with Ketoacidosis
  - Secondary Diabetes with Hyperosmolarity
- ▶ Catheter-Associated Urinary Tract Infection (CAUTI)
- ▶ Vascular Catheter-Associated Infection– (CLABSI) **NEW**

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Inpatient Prospective Payment System (IPPS) FY 2013 Final Rule: <http://www.cms.gov/>

### Process Of Care Measures

Acute Myocardial Infarction		Achievement Threshold	Benchmark
AMI-7a	Fibrinolytic Therapy Received Within 30 Minutes of Hospital Arrival	0.6548	0.9191
AMI-8a	Primary PCI Received Within 90 Minutes of Hospital Arrival	0.9186	1.0000
Heart Failure			
HF-1	Discharge Instructions	0.9077	1.0000
Pneumonia			
PN-3b	Blood Cultures Performed in the Emergency Department Prior to Initial Antibiotic Received in Hospital	0.9643	1.0000
PN-6	Initial Antibiotic Selection for CAP in Immunocompetent Patient	0.9277	0.9958
Healthcare-Associated Infections (as measured by SCIP measures)			
SCIP-Inf-1	Prophylactic Antibiotic Received Within One Hour Prior to Surgical Incision	0.9735	0.9998
SCIP-Inf-2	Prophylactic Antibiotic Selection for Surgical Patients	0.9766	1.0000
SCIP-Inf-3	Prophylactic Antibiotics Discontinued Within 24 Hours After Surgery End Time	0.9507	0.9968
SCIP-Inf-4	Cardiac Surgery Patients with Controlled 6AM Postoperative Serum Glucose	0.9428	0.9963
Surgeries (as measured by SCIP)			
SCIP-VTE-1	Surgery Patients with Recommended Venous Thromboembolism Prophylaxis Ordered	0.9500	1.0000
SCIP-VTE-2	Surgery Patients Who Received Appropriate Venous Thromboembolism Prophylaxis Within 24 Hours Prior to Surgery to 24 Hours After Surgery	0.9307	0.9985
SCIP-Card-2	Surgery Patients on a Beta Blocker Prior to Arrival That Received a Beta Blocker During the Perioperative Period.	0.9399	1.0000

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### Healthcare Associated Infections (HAI)

- The most common HAI's are:
  - VAP (Ventilator Associated Pneumonia)
  - CLABSI (Central Line Associated Blood Stream Infections)\*
  - SSI (Surgical Site Infections)\*
  - CAUTI (Catheter Associated Urinary Tract Infections)
  - MDRO (Multiple Drug Resistant Organism) infections
  - Cdiff (Clostridium Difficile) infections
- On average, each HAI costs the involved hospital \$23,228\*



\*Economic Analysis of Healthcare Associated Infections. [OE Healthcare \(2011\)](#)

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## Appendix F

### VBP Educational Module (continued)

#### CEO's & CFO's Are Asking Their Teams

- What is Value Based Purchasing? (formula is complex)
- Our revenue continues to decline, where should we focus?
- Are there other changes in reimbursement that will affect our hospital?
- What is the bottom line impact of healthcare reform on our hospital?
- What are we doing to improve?
- How long will it take?



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#### Focus on Quality and Safety



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#### Reimbursement Programs Focused on Quality

- **Value Based Purchasing (VBP)**
  - 1-2 % reduction in DRG total Medicare payment
  - Incentive payments made based on improved results
  - For 2013, includes acute myocardial infarction, heart failure, pneumonia, surgeries, and healthcare associated infections (SCIP)
- **Hospital Readmissions Reduction Program**
  - 1% payment reduction in 2012 for hospitals based upon a ratio of preventable readmissions to all discharges, progressing to 2% in 2014 and 3% in 2015
- **Hospital Acquired Conditions (HAC)**
  - 1% reduction in payment for hospitals in the top 25th percentile of rates of hospital-acquired conditions starting in 2015
  - As of 2008 HAC's no longer "count" toward a higher paying DRG
- **Healthcare Associated Infections (HAI)**
  - No separate program (yet), but SSI, CAUTI and CLABSI are on the HAC list. More are sure to be added

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Appendix F

VBP Educational Module (continued)

CMS is rewarding hospitals that provide high quality care for their patients through the new. Hospital **Value-Based Purchasing (VBP)** Program.

**HCAHPS**  
30%

+

**Core Measures**  
70%

**VALUE-BASED PURCHASING PERFORMANCE SCORE**

HCAHPS	Core Measures or Clinical Process of Care
<b>Patient Experience</b>	<b>Acute Myocardial Infarction</b>
Nurse Communication	Fibrinolysis Therapy Received within 30 mins of Hospital Arrival
Doctor Communication	Primary PCS surgical Site Infection, Mediastinitis, Following Coronary Artery Bypass Graft (CABG); Surgical Site Infection Following Cardiac Implantable Electronic Device (CIED) - NEW Deep Vein Thrombosis (DVT)/Pulmonary Embolism (PE) Following Certain Orthopedic Procedures:
Hospital Staff Responsiveness	Latrogenic Pneumothorax with Venous Catheterization Received within 90 mins of Hospital Arrival
Pain Management/Control	<b>Congestive Heart Failure</b>
Medication Communication	Discharge instructions received
Hospital Cleanliness and Quietness	<b>Pneumonia</b>
Discharge Information	Initial antibiotic selection for CAP in Immunocompetent patients
Overall Hospital Rating	Blood cultures before first antibiotic in ED
	<b>Healthcare Associated Infection (SCIP)</b>
	Prophylactic antibiotic given 1 hour prior to incision
	Appropriate antibiotic selection for Surgical Patients
	Prophylactic antibiotic discontinued within 24 hours of surgery
	Cardiac patients with Controlled 6 a.m. Postop. Serum Glucose
	<b>Surgical Infection Indicators</b>
	Beta blocker prior to admission and periop
	Recommended VTE Prophylaxis ordered
	Appropriate VTE Prophylaxis timing


(CMS, 2013).

## Value Based Purchasing Horizon

**SCORING**  
The hospital's Total Performance Score (TPS) will be weighted (scored) as follows:


**FY 2013**  
The hospital's Total Performance Score will be composed:

- 70% from the [12 Clinical Process of Care](#) measures
- 30% from the [8 Patient Experience of Care](#) dimensions



**FY 2014**

- 45% from the [13 Clinical Process of Care](#) measures
- 30% from the [8 Patient Experience of Care](#) dimensions
- 25% from the [3 Outcome Mortality](#) measures



(CMS, 2013).      Leanne Hunstock DNPc, MA, MBA, RN NEA-BC

## Vision-Strategy-Tactics

<b>Mission</b>	To meet the health and care needs our patients
<b>Vision</b>	Provide prevention, intervention, care and treatment in the most appropriate and least expensive setting closest to home for all patients. Deliver a network of integrated care across multiple settings
<b>Strategy</b>	Build operational performance excellence, maximize reimbursement, lower costs, increase quality, and enhance the patient experience.
<b>Goal</b>	Increase performance on all HCAHPS to Medicare mean or above over the next 6 months.
<b>Tactics</b>	TEAM <sup>1, 2, 3</sup>

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Appendix F

VBP Educational Module (continued)

## Big Picture Performance



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## Patient Experience Measures A Question of Frequency?

HCAHPS QUESTION	HCAHPS ANSWERS	CA Percentage answering "Always"	US Percentage answering "Always"
How often was the area around patients' rooms kept quiet at night?	Room was 'Always' quiet at night.	50	60
How often did staff explain about medicines before giving them to patients?	Staff 'Always' explained about medicines before giving it to them.	59	63
How often did patients receive help quickly from hospital staff?	Always received help as soon as they wanted.	60	66
Patients who gave a rating of 9 or 10 (high)	How do patients rate the hospital overall? (9 or 10)	67	69
How often was patients' pain well controlled?	Pain was 'Always' well controlled.	68	70
Would patients recommend the hospital to	Yes they would definitely recommend the hospital.	69	70
How often were the patients' rooms and	Room and bathroom were 'Always' clean.	70	73
How often did nurses communicate well with	Nurses 'Always' communicated well.	73	78
How often did doctors communicate well with patients?	Doctors 'Always' communicated well.	77	81
Were patients given information about what to do during their recovery at home?	Yes, staff did give patients this information	82	84

(CMS, 2013).

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## Survey Questions

Survey Topic	Survey Question
1) How often did nurses communicate well with patients?	During this hospital stay... How often did nurses treat you with courtesy and respect? How often did nurses listen carefully to you? How often did nurses explain things in a way you could understand?
2) How often did doctors communicate well with patients?	During this hospital stay... How often did doctors treat you with courtesy and respect? How often did doctors listen carefully to you? How often did doctors explain things in a way you could understand?
3) How often did patients receive help quickly from hospital staff?	During this hospital stay... How often did you get help as soon as you wanted after you pressed the call button? How often did you get help in getting to the bathroom or in using a bedpan as soon as you wanted?
4) How often was patients' pain well controlled?	During this hospital stay... How often was your pain well controlled? How often did the hospital staff do everything they could to help you with your pain?
5) How often did staff explain about medicines before giving them to patients?	Before giving you any new medicine... How often did hospital staff tell you what the medicine was for? How often did hospital staff describe possible side effects in a way you could understand?
6) How often were the patients' rooms and bathrooms kept clean?	During this hospital stay... How often were your room and bathroom kept clean?
7) How often was the area around patients' rooms kept quiet at night?	During this hospital stay... How often was the area around your room quiet at night?
8) Were patients given information about what to do during their recovery at home?	During this hospital stay... Did hospital staff talk with you about whether you would have the help you needed when you left the hospital? Did you get information in writing about what symptoms or health problems to look out for after you left the hospital?
9) How do patients rate the hospital overall?	What number would you use to rate this hospital during your stay?
10) Would patients recommend the hospital to friends and family?	Would you recommend this hospital to your friends and family?

(CMS, 2013).

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Appendix F

VBP Educational Module (continued)

## Your Unit's Performance

Leanne Hunstock DNPc, MA, MBA, RN NEA-BC



## References

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Appendix F

VBP Educational Module (continued)



## Part II Improvement at the Microsystem Level Performance Tune-up:

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## Tune-up your performance


- Engage a team in improving performance on critical element quality for their units.
- Begin with the aspects of the patient care experience as described in HCAHPS measures.
- Nominate – Educate – Participate – Replicate
- Steps
  - Link the patient experience- of-care measures, patient safety and quality and hospital reimbursements and the value-based purchasing. Link the staff engagement and the benefit of high performance
  - Build case for change through education and information
  - Identify a realistic opportunity for improvement
  - Develop a plan for improvement that is participant owned
  - Monitor and spread through this process

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## Conference Model Process

Conference 1	Off- line Work	Conference 2	Off- line Work	Conference 3	Off-line Work
Tune Up Team of department stakeholders and department leaders identify goals and barriers to high performance	Tune up team conducts meetings and confers with stakeholders for input into proposed process designs and changes etc.	Tune up team plans and confirm pilot for major model or process changes with timeline & resource needs	Implement pilot process and rapid cycle design changes. (multiple cycles)	Modify final plans and process changes based on pilots.	Present results for replication and spread evaluation
Modify or design infrastructure & processes for patient care services or department operations service.	Targeted task forces work of specific objectives the support success of major model/ process changes.	Task force plans and confirms rapid cycle pilots.	Measure progress and result. (PDSA)	Task forces refine model and apply learning from pilots to broader infrastructure processes i.e. recruitment, education, policies.	Select next target measure for improvement
2 days	40 days	1 day	45 days	1 day	14 days



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## Appendix F

### VBP Educational Module (continued)

#### Conference Day 1 Agenda

- Welcome and Introductions
- Warm-up Exercise
- Vision For Excellence
- The Real Life (A patient's experience)
- Unit SWOT and Brainstorm
- Group Priorities in your team
- Team Reports on Priorities and key opportunities
- Summarize and Debrief



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#### Conference Day 2 Agenda

- Welcome
- Warm-up Exercise
- Recap and Refresh
- Team Prioritization and Brainstorming solutions
- Team Presentations
- Large group feedback
- Energy Break
- Rapid redesign pilots and work for feedback from peers, resource
- Report out to large group
- Summarize day, homework and debrief



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#### Your Unit's Vision of the Patient's Experience

- Part 1. Define the ideal Patient Experience on your unit
  - From the Patient's, Physician's and Staff's perspective
- Part 2. Select one-two aspects of care for improvement
- Part 3. Break into teams (will stay together throughout process)
  - Identify goals consistent with our vision
  - Identify glitches and gaps and barriers
  - Quick fixes/ No Brainers
  - What analysis do we need, (hypothesis testing, flow charts, interviews, research, budget projection)
  - Select spokesman to report out




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Appendix F

VBP Educational Module (continued)

## Operational Core Competencies

Five core areas of effective patient care delivery that help to provide a framework for departmental operations.




MANAGEMENT/ ORGANIZATION	HUMAN RESOURCES SYSTEMS	OPERATIONAL SYSTEMS	CLINICAL CARE DELIVERY	PERFORMANCE IMPROVEMENT
<ul style="list-style-type: none"> <li>❑ Management training/leadership development</li> <li>❑ Management tools needed</li> <li>❑ Management and supervisory structure</li> <li>❑ Leadership styles</li> <li>❑ Unit/service culture</li> </ul>	<ul style="list-style-type: none"> <li>❑ Performance reviews, pay and incentives</li> <li>❑ Staff training / continuing education / professional development</li> <li>❑ Personnel recruitment, selection, hiring</li> <li>❑ Personnel retention</li> <li>❑ Personnel policies and procedures</li> </ul>	<ul style="list-style-type: none"> <li>❑ Technology / equipment support</li> <li>❑ Medication Equipment / supply procurement, distribution</li> <li>❑ Transportation of people, medications, specimens, supplies, equipment, etc.</li> <li>❑ Other</li> </ul>	<ul style="list-style-type: none"> <li>❑ Care delivery model                             <ul style="list-style-type: none"> <li>❑ Roles</li> <li>❑ Skill Mix</li> </ul> </li> <li>❑ Patient flow</li> <li>❑ Case Management</li> <li>❑ Documentation / clinical information systems</li> <li>❑ Patient / clinical education</li> <li>❑ Patient grouping/ aggregation</li> <li>❑ Support and Ancillary Services</li> </ul>	<ul style="list-style-type: none"> <li>❑ The Patient experience and HCAHPS</li> <li>❑ Quality ( HAC)</li> <li>❑ Productivity performance</li> <li>❑ Financial performance</li> <li>❑ Clinical outcomes</li> <li>❑ Staff/Physician satisfaction</li> <li>❑ CMS and TJC</li> <li>❑ Regulatory compliance</li> <li>❑ Consistent readiness state</li> </ul>

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## Redesign Process Overview

We would like to ensure the entire team has an opportunity to be involved in all phases of the process from design to implementation. Small tests of change; visibly testing prototype design ideas at the unit level maximizes staff participation and creation of practical solutions

**How can we identify the areas for that have the most opportunity?**



**Planning**


**Who:**

- Staff representatives
- Managers, Ancillary Staff, physicians
- Patient input

**What:**

- Understand the performance goals
- Understand process improvement techniques
- Identify and prioritize the areas to focus on in each functional area
- Determine the approach for unit staff sessions and communications
- Establish work groups and team rules


**How will we get staff and stakeholder involvement?**



**Focused Feedback**

- Ideas generated at the Conferences will be discussed with the people who are closest to the work: front-line staff and physicians
- Caregivers will validate/identify the problems that if addressed correctly, would make the work easier/more efficient and effective
- Managers and team members will facilitate unit level sessions designed to solicit ideas and get feedback to the functional teams

**How will we actually redesign our processes?**




**Get the Right People, Rapidly Create a "Prototype," and Test and Improve**

- Work groups rapidly develop testable solutions
- Develop an implementation plan and pilot it rapidly on selected units
- Test "prototype" designs to see what adjustments and improvements need to be made
- Monitor progress and measure results
- Communicate and celebrate successes
- Keep improving as you go

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## Design Tools



- The Lean tools adapted to the health care environment included the following:
- Tools which permit the identification of waste and impeded flow:
  - 5S (sort, shine, set, standardize and sustain).
  - Value stream mapping.
  - Spaghetti diagrams.
- Tools which permit fixing the waste and impeded flow:
  - Standard work.
  - Pull and continuous flow.
  - One piece flow.
  - Visual signals.
  - Quick change over.
  - Kaizen (continuous improvement).
- Tools which permit use of tools in a focused manner:
  - Rapid improvement events.
  - 3P processes (related to creating the efficient design and use of new space).

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*Appendix G*

Sample Evidence-Based Business Case for a Clinical Nurse Leader Pilot

A Proposal for  
Improving Value Based Purchasing Performance  
Through the Implementation of the Clinical Nurse Leader Role

This Evidence-Based Business Case for a Clinical Nurse Leader Pilot  
Has Been Developed as a Template for the  
Chief Nursing Officer



### **Sample Executive Summary**

The healthcare industry is focused on the implementation of the Affordable Care Act (ACA), the payment reform package from Centers for Medicare and Medicaid Services (CMS) and development of Accountable Care Organizations (ACO). For the purpose of this example, a fictitious hospital, situation and current and future performance data has been described. Sample Medical Center should be replaced with an actual hospital name, situation, demographic and performance information when describing current performance and potential return on investment.

For care provided to Medicare beneficiaries, Sample Medical Center (SMC) is paid for performance on quality outcomes through Value Based Purchasing (VBP). The decisions, behaviors and practices of the medical staff and the clinical staff, would directly impact patient care quality and subsequently cost and reimbursement. The hospital's overall quality, readmission rates and Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) scores are below thresholds and are affecting reimbursement levels. The imperative to balance quality, patient safety with cost effectiveness requires a complex orchestration of all the elements of care within the clinical microsystem. The priority is to support and enable the bedside nurse's daily practice, priorities, and decision-making in the hospital setting.

The role of the Clinical Nurse Leader (CNL) is a fundamental link to spreading knowledge and changing practice. This business case would propose a implementation and one-year pilot of a Clinical Nurse Leader program. The pilot must be self-funded through cost avoidance, savings or revenue enhancement or due to improvements in care outcomes including patient satisfaction and length of stay. Justification would be based on the value of

improvements to quality as measured on standard, existing indicators over the pilot year, measured quarterly and compared to baseline performance of the quarter immediately prior to the implementation of the pilot.

### **Sample Current Situation**

SMC is a 450 bed full service urban teaching medical center with a payer mix of 40% Medicare, 20% Medicaid, 20% HMO commercial and 20% self pay. Some of the self-pay loss is recouped through disproportional care hospital (DSH) subsidies from the state. The Medicare average length of stay is 6.8 days and the case mix index (CMI) is 1.54. This is a moderately high CMI, comprised of patients with complex clinical and socio-economic issues. They are elderly and low-income populations with generally poor health and many comorbidities. There are few placement options for patients without resources, complex follow-up needs or high acuity, driving prolonged hospitalizations. SMC has plateaued on its performance on patient satisfaction and quality performance. Over the past two quarters SMC continues to underperform compared to other competitors and national Medicare averages. This performance has resulted in a reduction of SMC's Medicare reimbursement based on Value Based Purchasing (VBP) indicators that measure patient satisfaction and core clinical measures.

SMC is a university affiliated teaching hospital with some reimbursement benefit from Medicare. However, due to the high cost of care, SMC needs every cent of reimbursement to cover its costs. The hospital is struggling to make its budget and costs are driven by the high length of stay and hospital acquired conditions such as urinary tract infection (UTI) and avoidable complications. CMS recently began penalizing hospitals for these avoidable poor quality outcomes and poor service scores by reducing overall

reimbursement. Additionally, CMS is not paying for additional hospitalization days and procedures nor treatments that were due to hospital errors or avoidable conditions such as infections, falls injuries, medication errors resulting in complications or death. SMC has lost 1% (\$5 Million) of its \$500 million in Medicare reimbursements through VBP payment reductions. Unfortunately, SMC has failed to earn the reimbursement back through incentive reward for performance on HCAHPS and the core measures. In the absence of improvements, next year's penalty would rise to 1.5% and more annually in subsequent years. This is in addition to \$28 million loss due to avoidable days, hospital acquired conditions and fines for failure to comply with CMS regulations related to hospital acquired and reportable patient safety violations.

Starting in FY 2013 1% of each hospital's (DRG) Medicare payments are taken back and redistributed as incentive payments. There are two ways to earn incentives: improvement against past hospital performance for all 20 metrics during the baseline period and achievement against performance of other CMS hospitals between the 50th and 95th percentile nationally on HCAHPS (CMS, 2013). SMC earned back only 0.2% of the 1% incentive for a net reduction of 0.8%. The reduction – incentive formula would continue to increase until 2017 up to a maximum of 2% on the HCAHPS and quality measures including additional core measures (CMS 2013).

Given the magnitude of the financial impact anticipated next year as a result of performance, a significant intervention is required to improve quality, safety and service performance. The integration of CNLs into the clinical microsystem is an evidence-based intervention that can easily pay for itself through cost savings and loss avoidance. CNLs

can manage complex patients, and coordinate care systems and disciplines across the microsystems.

### **Sample Background and Support for the Pilot**

#### **Clinical Nurse Leader Role**

The Institute of Medicine's (IOM) report on the Future of Nursing (2011) and the recommendations of the American Association of Colleges of Nursing (AACN, 2007) are directly related to healthcare reform's quality initiatives and pay for performance. The AACN (2007) identified the knowledge of health care systems and policy as a core competency of the CNL. The imperative to balance quality and patient safety with cost effectiveness requires a complex orchestration of all the elements of care within the clinical microsystem and between the microsystem and macrosystem. Preparation of the CNL includes an understanding of "the economies of care, a beginning understanding of business principles, and an understanding of how to work within and affect change in systems" (AACN, 2007, p. 24).

The role of the CNL was developed to provide an advanced generalist, Master's prepared registered nurse who manages and provides care for patients across various care settings assimilating and applying evidence-based approaches to design, implement and evaluate plans of care. The CNL is prepared to provide quality, cost-effective care, to participate in the implementation of care in a variety of health care systems, and to assume a leadership role in the managing of human, fiscal, and physical health care resources at the microsystem level (AACN, 2007).

Additionally, the CNL critically evaluates and anticipates risks to patients, manages care and triggers at the point of care to individuals, clinical populations, and communities.

The CNL assumes responsibility for health outcomes, and coordinates and delegates care provided by the healthcare team. The CNL functions as a lateral integrator of evidence-based care and coordinates care while being a steward of the environment and resources, providing research and coordinating the multiple services and providers (Harris & Ott, 2008).

Tornabeni and Miller (2008) describe the CNL's extensive preparation and broad capability including the ability to identify clinical and cost outcomes that improve safety, effectiveness, timeliness, efficiency, and quality. Additionally, the CNL is a lateral integrator of care for a cohort of clients who communicates effectively to achieve quality client outcomes and is accountable for healthcare outcomes for a specific group of clients (Tornabeni & Miller, 2008).

Harris, Stanley, and Rosseter (2011) note that eligibility to use of the title "clinical nurse leader" or the credential CNL, requires an RN license and graduation from a CNL master's-degree program or a CNL post-master's degree certificate program that is certified by the Commission on Nurse Certification (Harris, Stanley, & Rosseter, 2011).

Questions often arise regarding the overlap of the roles of the Clinical Nurse Specialist (CNS) an advanced practice Registered Nurse (APRN) and the credentialed CNL. According to Harris et al. (2011) the CNS is a specialist with advanced knowledge and expertise in a specialty area of clinical practice while the CNL is prepared with a focus on care coordination, quality, and safety without an area of specialty practice. The CNL is neither an APRN nor in a managerial role. The CNL practices primarily at the microsystem level of care in any type of health-care setting while the CNS primarily functions at the mesosystem and macrosystem levels. The CNS focuses on issues across the system and

supports the CNL's role in overseeing patient care and identifying gaps in staff expertise at the unit level (Harris et al., 2011).

### **Evidence Supporting The Impact Of The CNL**

Evidence from a search of recent literature produced qualitative studies from 2007 through 2013, each support that the integration of the CNL role positively affected a number of indicators in the area of quality and patient satisfaction. In addition, the cost of care was reduced by reductions in length of stay and hospital acquired conditions, efficiency through expediting throughput. All of these performance indicators drive reimbursement under Medicare payment reform.

Bender, Connelly, Glaser and Brown (2012) demonstrated the positive impact of the CNL on patient satisfaction, pre and post implementation of the role. A short interrupted time series design was used to measure patient satisfaction in multiple aspects of care 10 months before and 12 months after integration of the CNL role on a progressive care unit, compared with a control unit. Data was obtained from standardized patient satisfaction surveys and analysis was completed for short time series data streams. Improvement was seen between the pre and post implementation time periods for the unit with the CNL while the control unit remained unchanged for both time periods (Bender et al., 2012).

The Veterans Administration Medical Centers (VAMC) conducted a qualitative study following the implementation of the CNL role within the VAMC system. The data suggested that the CNL role positively affected the RN hours per patient day and quality indicators. Quality indicators that demonstrated improvement were: reduction in GI case cancellations, sitter usage, pressure ulcers and ventilator assisted pneumonia. Additional findings were increases in restorative dining, discharge teaching compliance, patient

satisfaction and innovation. The authors noted that integration of the role across all practice areas has potential to streamline and coordinate care (Ott et al., 2009).

Stanley et al. (2008) conducted a qualitative study using three case studies that followed newly graduated CNLs. Each case study was from a different location and facility. The CNLs maintained journals that were evaluated for indications of innovation, development of lateral team relationships and patient relationships. An evaluation plan was developed. Pre and post implementation outcome data were collected on clinical quality core measures, patient satisfaction, physician satisfaction, customer loyalty, employee engagement, turnover and vacancy rates, length of stay for their units. Improvement was seen in every indicator in each setting for the period compared to the immediate prior period. Although the authors could not conclude a direct relationship between the CNL role implementation and the changes in outcomes measures, there was a significant cost savings in very short periods of time and similar quality and outcome are being reported across the country (Stanley et al. 2008).

Tachibana and Nelson-Peterson's (2007) case study describing Virginia Mason's implementation of the CNL role focused on the management of a complex patient population in the acute care setting. Benefits of reduced length of stay (7%), better continuity and coordination and higher patient satisfaction were reported for the population. In addition to the benefits above, the authors expressed the CNL role successfully addressed the gap for the patients with complex care needs by providing a graduate level nurse who can articulate the plan of care across shifts and disciplines, improve patient outcomes and satisfaction, and provide resources and expertise to both patients and staff (Tachibana & Nelson-Peterson, 2007).

Wilson et al. (2012) found similar results in a qualitative descriptive study of a single hospital CNL cohort between 2007 and 2012 using pre and post intervention data on quality and financial metrics. A cohort of practicing CNLs evaluated the effectiveness of the role with case studies and clinical outcomes measures, financial savings, reduction in Clostridium Difficile (c-diff) infection rates, increase in core measures, and patient education demonstrated consistently across various patient populations. Cost savings in excess of \$2.5 million were documented demonstrating CNLs' attention to fiscal stewardship. For example, over \$110,000 was saved in one year on the prevention of catheter-associated blood stream infections, \$183,000 in one year was saved by decreasing pressure ulcers and nearly \$500,000 in one year was saved by avoiding the need for higher level of care in pediatric patients (Wilson et al., 2012).

With the CNL's impact on quality and safety, hospitals are increasingly interested in implementing this role. Insight into CNO's support to fund and implement this clinical role is important. Sherman (2008) conducted a grounded theory methodological study to understand why CNOs involved their organization in a 2004 CNL pilot project. Twenty-five CNOs were interviewed. The themes and concepts that emerged from the data were coded into categories that formed an explanatory framework for organizational involvement. Five major factors were identified from the research to form a framework designed to explain organizational participation: organizational needs, a desire to improve patient care, an opportunity to redesign care delivery, the promotion of the professional development of nursing staff, and the potential to enhance physician-nurse relationships (Sherman, 2008).

The critical appraisal and application of evidence-based practice to patient care coordinated through an interdisciplinary team requires a critically thinking leader. The CNL



brings a view across the clinical microsystem and the macro system with the ability to integrate innovation and evidence into practice. The literature to date has established the role by demonstrating that it is a key factor in increasing quality outcomes. Initially, the CNL role should be reserved for those patients whose complex course of care undermines the organization's quality and safety performance and ultimately the organization's financial performance. Limiting, focusing and positioning the CNL role as a focused interventionist role would provide the opportunity to demonstrate the value in the most difficult intractable conditions thereby solidifying the role's value and future and while making it more affordable.

In addition to quantifying reimbursement change as a result of improving the HCAHPS scores, pre and post implementation cost analysis should be employed to demonstrate the ROI in a quantitative fashion to support the impact of the CNL program. This can be accomplished using an accepted method for identifying the cost of various clinical conditions and adverse events. Spetz, Brown, Aydin, and Donaldson (2013) illustrated a framework for analysis of costs using Agency for Healthcare Research and Quality (AHRQ) Quality Indicators Toolkit (AHRQ, 2012). Based on data from the Collaborative Alliance for Nursing Outcomes (CALNOC) the researchers quantified the monetary value of the cost of care and savings as a result of reducing hospital acquired pressure ulcers (Spetz, Brown, Aydin, & Donaldson, 2013).

### **Sample Proposed Solution**

Providers in the healthcare industry are facing an aging population, a growing need to manage chronic illness across the care continuum and a lifespan, and the imperative to provide services more efficiently and effectively than ever with fewer human and fiscal

resources (Harris & Ott, 2008). SMC's current and future circumstances require intervention and change on multiple levels of how the organization does business and cares for patients. The current processes and systems do not meet the minimum bar of performance and certainly cannot achieve and sustain success under the new ground rules of healthcare reform.

In response to this growing need, the introduction of the CNL role into SMC's care delivery system at the microsystem level is required to reverse the continuing cycle of financial and quality deficits. The purpose of this proposal is to present a business case, program options and a plan for implementing the CNL role. The value of the CNL role would be justified by establishing the value of the CNL based on the impact on the three major drivers of pay for performance: patient quality, safety and patient satisfaction. Three options would be discussed below.

**Option One: Do nothing**

Proceeding with the status quo would essentially continue the loss of revenue and would increase over time. The organization would likely suffer from the loss of reputation due to the publically available data reported about the organization's quality. The organization would be disadvantaged in contracting with large payers, (Medicare and Medicaid) and would eventually be unable to bring in enough revenue to cover the cost of care. In that case, financial reserves would be exhausted with in two years. If quality continued to suffer, Medicare would revoke deemed status and fines would contribute to the financial woes of the organization. The continued influx of uninsured patients through the emergency room would create an untenable financial situation in which desirable staff and physicians would be difficult to recruit and retain. Teaching affiliations would eventually be

cancelled due to quality and patient safety concerns. In the perfect storm, the organization would certainly not survive until 2017 despite any monetary reserves.

**Option Two: Develop and implement and SMC CNL pilot**

This option would recruit and assign certified CNLs to each of the ten acute care units at a ratio of one CL per unit. It is proposed that the hospital fund one FTE for each of the ten hospital units/services to function in a CNL unit based role working with the interdisciplinary clinical team as described above. This is the recommended option due to the difficulty recruiting CNLs for less than one year. The change cycle would take an extended amount of time to introduce a new role and new CNLs into the care delivery system. Some of the CNLs may be new to the role and would need support, as any new grad would require. This may be a risk to this option's success and may require out of area recruitment to ensure that some level of nursing experience is present.

**Option Three: Modified smaller and shorter pilot**

This option modifies Option Two by reducing the number of pilot units and CNL FTEs to five for six months or one year. The shortened time frame is not recommended due to the ramp up time including initial engagement time required for a startup pilot. This approach would have a high risk of failure because it provides either insufficient time or insufficient numbers of CNLs.

**Option Four: Develop and implement a partnership with the university CNL program**

This option calls for partnering with the local university CNL program. SMC would function as a clinical site for CNL students and hire them into entry-level unit based roles. The duration of this pilot would be one year to allow for a commitment to the university for student clinical time. The partnership would reduce recruitment costs for the CNLs and

provide the benefits of ongoing innovation as well as more CNL influence on the microsystem for accelerated support and adoption. The cost would be approximately the same as option two. This option is very appealing since SMC already has students from the university BSN and MSN programs in clinical rotations here. However based on SMC's multiple priorities and urgency to accelerate performance improvement the risk is that it may be difficult to launch the pilot internally in conjunction with a enhanced clinical affiliation concurrently. The recommendation is to launch the pilot and once the CNL role is deemed to be successful and permanent, the affiliation discussion can move forward.

**Strengths, Weaknesses, Opportunities and Threats (SWOT)**

The SWOT analysis supports the proposal to implement a CNL pilot with a balanced view of the potential risks and opportunities to mitigate them. The SWOT analysis is in Table 1 below.

SWOT Analysis

Table 1

<p><u>Strengths</u></p> <ul style="list-style-type: none"> <li>• Use of evidence-based interventions</li> <li>• CNLs have demonstrated improvements and positive impact on HCAHPS, Quality and patient safety</li> <li>• Improved recruitment and retention of staff</li> <li>• Enhancements in care coordination and collaboration</li> <li>• Patient and family satisfaction with level of participation</li> </ul>	<p><u>Opportunities</u></p> <ul style="list-style-type: none"> <li>• Transparency and bold action and intervention would be appreciated by stakeholders</li> <li>• Improvement in quality, service safety and financial position</li> <li>• Innovation</li> <li>• Redesign of care delivery systems</li> <li>• Service line profitability</li> </ul>
<p><u>Weakness</u></p> <ul style="list-style-type: none"> <li>• Expensive</li> <li>• Not widely used in California</li> <li>• Six month commitment may be too short of a time frame to support recruitment</li> <li>• There are few new grad placements for CNL</li> <li>• Staff resistance to change</li> <li>• Introduction of a successful CNL role may require changes to existing roles</li> <li>• Role confusion between CNL, Advanced Practice RN, manager, supervisor, care coordinator case manager</li> </ul>	<p><u>Threats</u></p> <ul style="list-style-type: none"> <li>• Reluctance of the hospital to make investment</li> <li>• Difficulty recruiting for a short pilot</li> <li>• Needs “ramp up” time to achieve benefits</li> <li>• As reimbursement penalties increase hospitals would compete for the CNL</li> <li>• Only one CNL program in town</li> <li>• Time frame for improvement may be too short</li> <li>• CNL delegation skill may be underdeveloped</li> <li>• Role confusion</li> <li>• Lack of continuous visible support from CNO</li> </ul>

### **Stakeholders and Organizational Readiness**

An assessment of readiness to introduce a new clinical role is required to minimize the pitfalls and barriers associated with structural and process changes. If a university partner were involved, a determination of mutual expectations, benefits and procedures for the clinical affiliation would need to be conducted (Harris & Ott, 2008). The organization is not unionized; therefore the organized labor complexities can be avoided.

Preparing the organization would require making the case for change or business case to the many stakeholders. The stakeholders are the patients, families, community, medical executive committee, care coordinators, case managers, nursing educators, APRNs, physicians, nurses, quality and performance improvement staff, pharmacists, therapists and administrators. Potential students, faculty and the university administration would become stakeholders under option four. Once the pilot has been approved at the executive level, the education for stakeholders would begin. A transparent case for change should be provided to all stakeholders. All parties involved in the pilot would participate in focus groups to identify anticipated barriers and future need for more information and intervention such as education, policy changes, procedural and workflow changes, communication plans and the evaluation process.

### **Sample Evaluation Plan**

The CNL pilot's effectiveness would be based upon the each CNL's unit's performance on the appropriate department-based and hospital-based indicators compared to the baseline period are listed below. The quality department would track all indicators below quarterly. Data would be measured in both unit and hospital performance quarterly

compared the last quarter prior to implementation of the pilot (CMS, 2013). The indicators are:

- Length of stay, readmissions
- Internal indicators: sitter usage, employee engagement

HCAHPS: the patient experience performance is worth 30% of 2013 VBP score

- Nurse Communication
- Doctor Communication
- Hospital Staff Responsiveness
- Pain Management/Control
- Medication Communication
- Hospital Cleanliness and
- Quietness Discharge Information
- Overall Hospital Rating

Core Measures: Clinical Processes of Care accounts for 70 % of 2013 VBP score

- Acute Myocardial Infarction
- Congestive Heart Failure
- Healthcare Associated Infection (SCIP)
- Surgical Infection Indicators Pneumonia

Hospital Acquired Conditions (HAC)

- Surgical Site Infection, Mediastinitis, Following Coronary Artery Bypass Graft (CABG)
- Surgical Site Infection Following Bariatric Surgery for Obesity
- Surgical Site Infection Following Certain Orthopedic Procedures

- Surgical Site Infection Following Cardiac Implantable Electronic Device (CIED) – NEW
- Stage III and IV Pressure Ulcers Falls and Trauma

#### Hospital Acquired Infections Affecting Reimbursement

- Ventilator Associated Pneumonia (VAP)
- Central Line Associated Blood Stream Infections (CLABSI)
- Surgical Site Infections (SSI)
- Catheter Associated Urinary Tract Infections (CAUTI)
- Multiple Drug Resistant Organism (MDRO) infections
- Clostridium Difficile (Cdiff) infections

(CMS, 2013).

### **Sample Implementation Plan and Milestones**

Important factors in outcome achievement and sustainability were the degree of successful implementation and integration of the CNLs into the clinical microsystem or care setting. Studies indicated a lack of understanding about the role throughout the organization, the lack of an organized and systematic entry process, and the lack of visible support from the nursing administrative leadership and the CNO as barriers to success.

(Bombard et al., 2010; Moore & Leahy, 2012).

The pilot would be implemented under the direction of the Associate CNO (ACNO) and the Nursing Executive Council (NEC). The milestones by quarter are Months one - three: Approve job description, recruitment of ten CNLs, orientation, communication to all stakeholders, unit staff meetings to educate the clinical staff about the role and identify potential barriers and solutions, Identify criteria for the most complex patient populations by



unit, develop process to assign patients to be followed by CNL, approve evaluation plan, data collection plan and financial impact analysis plan. Month four-twelve: Provide monthly support meetings for CNLs with teams, Manager, and ACNO and CNO. Monitor care planning and length of stay, patient satisfaction, and team satisfaction, evaluate all indicators with executive team and all participants (see Gantt Chart in Appendix A).

Required resources would be in terms of time from organizational resources: The Chief Nursing Officer (CNO), the Associate CNO, ten nurse managers, whose units would participate in the pilot, the nurse recruiter, the nursing educators, the Quality nurse and an APRN. The estimated number of days and the estimated cost to the organization is detailed in the budget (see Budget in Appendix B).

### **Sample Financial Benefits**

The estimated total cost of the pilot is \$300,000 for one year and improvements are valued at five percent and ten percent over the baseline. The cost/benefit analysis for client based benefits and return on investment (ROI) (see Budget in Appendix B) illustrates a very conservative improvement of five to ten percent over baseline on the list of indicators. At five percent improvement the ROI is 4.3 to one and at ten percent improvement the ROI is 8.6 to one. In order to remain cost neutral at a minimum two percent improvement is required.

### **Conclusion**

The evidence supports the premise that a generic master RN role, trained in enhanced application of evidence based practice interventions can positively impact improvement of the complex patient's condition and course of care. The evidence also illustrates the improvements to quality, safety and cost savings and revenue recovery that

can be achieved by the integration of the CNL into the clinical microsystem. On a conservative level the pilot's benefits would strongly exceed its cost and would help SMC to maintain current performance. The risk of doing nothing would not maintain current performance. Fragmentation of care would continue to erode the financial reserves and require the organization to absorb the monetarily losses in addition to erosion of SMC's reputation and teaching affiliation. It is clear that the CNL role is designed to specifically address the needs of SMC. It is imperative to act quickly to compete for the small pool of CNLs in the community. Support for this proposal is requested immediately.

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## Appendix C

## Sample CNL Pilot Gantt chart

<b>CNL Pilot Gantt Chart</b>				
<b>Task Name</b>	<b>Start Date</b>	<b>End Date</b>	<b>Assigned To</b>	<b>Duration</b>
CNL Kick-off Meeting Planning Session	07/01/14	07/01/14	CNO and Associate CNO	1
CNL Kick-off Meeting	07/10/13	07/10/14	Associate CNO	1
CNL Educator Content Planning	06/15/14	07/15/14	Nurse Educator Council NEC	30
Finalize Job Description Recruitment Plan and execute	07/01/14	07/10/14	Nurse recruiter	10
Communicate case for change and plan to organization	07/15/14	07/30/14	CNO and Associate CNO	14
CNL implementation planning meeting	Biweekly	12/30/14	Associate CNO	90
Recommended Evaluation Tools Distributed	07/15/14	07/30/14	Chairperson, NEC	14
Draft CNL orientation and integration curriculum	07/15/14	07/30/14	Chairperson, NEC	30
Kick off orientation of 10 CNLs	08/01/14	09/04/14	Chairperson, NEC	30
CNL Pilot begins	09/01/14	08/30/14	Associate CNO	365
Collect and evaluate quarterly performance data	12/1/14	12/2/15	Quality	365
Unit staff meetings	Monthly	Monthly	NEC	12

## Appendix D

## Sample Budget and Return on Investment

COST BENEFIT ANALYSIS/ ROI				
Annual Expenses				
Resource	Activity	Days per year	Cost per day	Annual cost
CNO	Sells project and ultimate accountability for ROI	6	\$300.00	\$1,800.00
ACNO	Lead project	14	\$250.00	\$3,500.00
Nurse managers	Project time to facilitate unit and team integration	30	\$200.00	\$6,000.00
Nurse recruiter	Recruit ten CNLs	20	\$100.00	\$2,000.00
Nurse educators	CNL Orientation	30	\$100.00	\$3,000.00
Quality RN	Data set up and analysis	12	\$100.00	\$1,200.00
APRN	Education and support in role clarification	5	\$100.00	\$500.00
Analyst	Financial analysis of performance monthly and quarterly	20	\$100.00	\$2,000.00
CNL	Unit based roles	2500	\$100.00	\$250,000.00
CNL	Orientation	200	\$100.00	\$20,000.00
MISC	Miscellaneous supplies and expenses			\$10,000.00
<b>Total</b>				<b>\$300,000.00</b>
Annual Improvement Benefit from Baseline				
Indicator		Value @ 10% improvement	Value @ 5% improvement	
VBP Improvement HCAHPS				
VBP Improvement Core Measures		\$250,000	\$125,000.00	
Length of stay reduction		\$1,000,000	\$500,000.00	
Surgical Site Infection, Mediastinitis, Following Coronary Artery Bypass Graft (CABG):		\$120,000	\$60,000.00	
Surgical Site Infection Following Certain Orthopedic Procedures		\$150,000	\$75,000.00	
Surgical Site Infection Following Cardiac Implantable Electronic Device (CIED) - NEW		\$150,000	\$75,000.00	
Stage III and IV Pressure Ulcers		\$200,000	\$100,000.00	
Falls and Trauma		\$150,000	\$75,000.00	
VAP (Ventilator Associated Pneumonia)		\$100,000	\$50,000.00	
CLABSI (Central Line Associated Blood Stream Infections)*		\$150,000	\$75,000.00	
CAUTI (Catheter Associated Urinary Tract Infections)		\$150,000	\$75,000.00	
Cdiff (Clostridium Difficile) infections		\$150,000	\$75,000.00	
<b>Total benefit</b>		<b>\$2,570,000.00</b>	<b>\$1,285,000.00</b>	
ROI				
ROI on 10% improvement		8.6 to 1		
ROI on 5% improvement		4.3 to 1		
ROI 2% improvement		1to1		

*Appendix H*

ELDNP Student Educational Curriculum Evaluations

ELDNP Students	Average Rating	very effective	somewhat effective	ineffective	need more information
From the perspective of a nurse leader, how effective does this material engage staff in improving HCAHPS performance?	100%	100%	0%	0%	0%
From the perspective of a unit based RN how effective do you think this material and collaborative approach would be in improving targeted HCAHPS scores?	<b>Average Rating</b>	<b>Very effective</b>	<b>Somewhat effective</b>	<b>Slightly effective</b>	<b>Not effective</b>
	96%	83.33%	16.67%	0%	0%
How clearly did the presenter present material?	<b>Average Rating</b>	<b>Extremely clearly</b>	<b>Moderately clearly</b>	<b>Slightly clearly</b>	<b>Not at all clearly</b>
	100%	100%	0%	0%	0%
Would you consider using this approach to improve performance on targeted HCAHPS domains?	<b>Average Rating</b>	<b>Yes absolutely</b>	<b>Yes with some modification</b>	<b>Maybe with some modification</b>	<b>I dont think so</b>
	96%	83.33%	16.67%	0	0
		5	1		
Would you consider using this approach with a facilitator?	<b>Average Rating</b>	<b>Yes absolutely</b>	<b>Yes with some modification</b>	<b>Maybe with some modification</b>	<b>I dont think so</b>
	96%	4	1	0	0
Showing 6 responses					
Well done.					
none at this time					
Excellent presentation. Would suggest presenting to the new cohort.					
Great job! Thanks!					
Good job although some of the slides were too wordy, recommend more slides with less words!					
Thanks - I enjoyed the presentation - we have used this process in our service meetings with staff. We share with them HCAHP scores - they are very versed in what questions make up each composite and how many patients it would take to move from usually to always to impact our scores! I love the challenge of improving the patient experience and consider it one of my strengths. I hope that you will find benefit from my DNP project in addition to this work to see how we can really impact HCAHP scores - the patient experience, and staff satisfaction! Thanks again					



*Appendix I*

CNL/MSN Students Evaluation of Curriculum and Educational Module

<b>CNL/ MSN Student Evaluation of Cirriculum and Education Module</b>						
<b>CNL/MSN</b>		<b>Extremely</b>	<b>Very</b>	<b>Somewhat</b>	<b>Slightly</b>	<b>Not at all</b>
How prepared was the presenter?	<b>Average</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
	<b>96%</b>	<b>88%</b>	<b>13%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>
How clearly were the materials and concepts presented to enhance learning?	<b>Average</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
	<b>90%</b>	<b>56%</b>	<b>44%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>
How appropriate were the materials for the level of the students?	<b>Average</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
	<b>90%</b>	<b>56%</b>	<b>44%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>
How well did this program meet its objectives?	<b>Average</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
	<b>90%</b>	<b>56%</b>	<b>44%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>
Was the presenter knowledgeable on the subject?	<b>Average</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
	<b>96%</b>	<b>81%</b>	<b>19%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>
From the perspective of a unit based RN, how effective do you think this approach would be in improving targeted performance?	<b>Average</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
	<b>90%</b>	<b>56%</b>	<b>38%</b>	<b>6%</b>	<b>0%</b>	<b>0%</b>
How important is the topic of VBP (HCAHPS, Quality and Safety initiatives) to the clinical nurse leader role?	<b>Average</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
	<b>96%</b>	<b>81%</b>	<b>19%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>
Please rate the overall classroom experience?	<b>Average</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
	<b>96%</b>	<b>88%</b>	<b>13%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>
How organized were the class curriculum and materials	<b>Average</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
	<b>96%</b>	<b>80%</b>	<b>20%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>
How likely are you to adopt any the curriculum and materials to the finance class in the future?	<b>Average</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
	<b>96%</b>	<b>80%</b>	<b>20%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>
<b>Sixteen CNL/MSN USF students reponded</b>						
<b>There were no comments offered</b>						

*Appendix J*

CNO Educational Curriculum Evaluations

CNO1	CNO 2	CNO 3	AVERAGE
<b>Q 1: How prepared was the presenter?</b>	<b>Q 1: How prepared was the presenter?</b>	<b>Q 1: How prepared was the presenter?</b>	
Extremely well prepared	Extremely well prepared	Extremely well prepared	100%
The packet of information supporting the topic was comprehensive and written in a way that nurse leaders, especially those who are close to the front line and patient care could easily understand the content.	Leanne's depth of knowledge on the subject is unparalleled. In my work experience, I've had the privilege of collaborating with consultants from the Studer Group as well as internal experts regarding the same content. Leanne's grasp of the data, her analysis and interpretation, and counsel for nurse leaders are heads and shoulders beyond the "experts."	Extremely well prepared	
<b>Q2: How clearly was the material and concepts presented to enhance learning?</b>	<b>Q2: How clearly was the material and concepts presented to enhance learning?</b>	<b>Q2: How clearly was the material and concepts presented to enhance learning?</b>	
Extremely clearly	Extremely clearly	Very clearly	92%
The PowerPoint presentation covered all of the salient points relative to ACA Medicare payment reform again that was clear to the learner and redesign methodology facilitated team participation that increases retention	Leanne has an exceptional ability to relate to all levels in an organization....from the staff at the front lines to the Board Room. This includes clinical and ancillary staff and their leaders. Truly amazing.	Materials were very comprehensive yet succinct enough for a staff nurse to understand clearly.	
<b>Q3: How appropriate were the materials for the level of Clinical RNs?</b>	<b>Q3: How appropriate were the materials for the level of Clinical RNs?</b>	<b>Q3: How appropriate were the materials for the level of Clinical RNs?</b>	
Extremely appropriate	Extremely appropriate	Extremely appropriate	100%
Written with the frontline leaders "need to know" information in mind- evident throughout.	Leanne has a gift--which I envy--regarding her ability to "customize" the message to fit the audience. She has a unique ability to craft the communication in a way that it will be heard and resonate with the receiver.....and, most important, because of that, it will result in action and outcomes.		
<b>Q4: How well did this program meet its objectives?</b>	<b>Q4: How well did this program meet its objectives?</b>	<b>Q4: How well did this program meet its objectives?</b>	
Extremely well	Extremely well	Very well	92%
This presentation definitely met the objectives as stated. the work shop tune up process engaged the team, the HCAHP review was relevant and the nominate-educate-participate- replicate resonated with the team and lastly, the steps fulfilled the purpose of linking the patient experience to safety, quality and VBP. Well done.	Feedback was unanimous--the best and most helpful ever heard in the subject. It takes a lot to impress the audience so the high praise is all the more impressive.		
<b>Q5: Was the presenter knowledgeable on the subject?</b>	<b>Q5: Was the presenter knowledgeable on the subject?</b>	<b>Q5: Was the presenter knowledgeable on the subject?</b>	
Extrememly knowledgeable	Extrememly knowledgeable	Extrememly knowledgeable	100%
Please comment Leanne is confident and knowledgeable- she also has a great sense of humor.	Please comment Please see comments under #1.		

Appendix I

CNO Educational Curriculum Evaluations (continued)

CNO1	CNO 2	CNO 3	AVERAGE
<b>Q6: From the perspective of a unit based RN, how effective do you think the collaborative approach would be in improving targeted HCAHPS or quality performance?</b>	<b>Q6: From the perspective of a unit based RN, how effective do you think the collaborative approach would be in improving targeted HCAHPS or quality performance?</b>	<b>Q6: From the perspective of a unit based RN, how effective do you think the collaborative approach would be in improving targeted HCAHPS or quality performance?</b>	
Extremely effective	Extremely effective	Extremely effective	100%
See above- every acute care RN could benefit from this presentation.	A cornerstone of my administrative practice in the Chief Nurse Executive role is helping the bedside, Charge, and Nurse Managers understand and execute their critical leadership roles for patient safety, quality, and service outcomes. This drive for excellence and delivery comes from the many great nursing leaders who I had the privilege of working or collaborating with during my career. These include Marie Manthey, Joyce Clifford, Donna Diers, Diana Weaver, and many others. I even had the opportunity to have teas with Virginia Henderson on many occasions. Like these consummate leaders who advocated so strongly for the key role of nursing in patient outcomes, Leanne's presentation connected the dots and showed the way. It made an impact and reconnected the audience to their roots and mission.	The idea of bringing forth interventions from the bedside up to improve HCAHPS scores makes sense. Too often we are introducing to staff what is "best practice" yet may not be successful for our patient population and organizational culture.	
<b>Q7: How important is the topic of VBP (HCAHPS, Quality and Safety initiatives) to the clinical nurse leader role?</b>	<b>Q7: How important is the topic of VBP (HCAHPS, Quality and Safety initiatives) to the clinical nurse leader role?</b>	<b>Q7: How important is the topic of VBP (HCAHPS, Quality and Safety initiatives) to the clinical nurse leader role?</b>	
Extremely important	Extremely important	Extremely important	100%
Please Comment No margin no mission-			
<b>Q8: Please rate the overall educational experience.</b>	<b>Q8: Please rate the overall educational experience.</b>	<b>Q8: Please rate the overall educational experience.</b>	
Excellent	Excellent	Excellent	100%
How could the class be improved? More patient experience scenarios.	How could the class be improved? Honestly, I have no suggestions for improvement. Leanne "nailed it."		
<b>Q9: How well organized were the class curriculum and materials?</b>	<b>Q9: How well organized were the class curriculum and materials?</b>	<b>Q9: How well organized were the class curriculum and materials?</b>	
Extremely organized	Extremely organized	Very organized	92%
How could the curriculum or materials be improved? No suggestions.	How could the curriculum or materials be improved? Both were exceptional. I have no suggestions for improvement.	How could the curriculum or materials be improved? The links to the materials were invaluable. I like how this course could be tailored as needed to the audience.	
<b>Q10: How likely are you to adopt any the curriculum and materials for a clinical RN education in the future?</b>	<b>Q10: How likely are you to adopt any the curriculum and materials for a clinical RN education in the future?</b>	<b>Q10: How likely are you to adopt any the curriculum and materials for a clinical RN education in the future?</b>	
Extremely likely	Extremely likely	Very likely	92%
	What needs to be improved? I endorse and accept the content as outlined. Both are a finished product which need no revision or amendments. It's a testimony to the quality of Leanne's work.	What needs to be improved? Nothing! Very well done.	

*Appendix K*

CNO Evaluation of CNL Business Case

CNO 1	CNO 2	CNO 3	AVERAGE
Please evaluate the CNL Business Case	Please evaluate the CNL Business Case	Please evaluate the CNL Business Case	AVERAGE
<b>Was the premise clear?</b>	<b>Was the premise clear?</b>	<b>Was the premise clear?</b>	
Extremely clear	Extremely clear	Extremely clear	100%
<b>Were the basic assumptions evidence-based?</b>	<b>Were the basic assumptions evidence-based?</b>	<b>Were the basic assumptions evidence-based?</b>	
Extremely so	Extremely so	Extremely so	100%
I have limited past experience with the CNL role and feel much more informed. It is an alternative we have not considered.	Yes and the case for change is complete and concise. It is definitely a model to consider.	Nice work. Perhaps we can contribute even more to the body of evidence.	
<b>Was the case for action persuasive?</b>	<b>Was the case for action persuasive?</b>	<b>Was the case for action persuasive?</b>	
Extremely so	Extremely so	Extremely so	100%
Yes the current environment is a wake up call.	I want to discuss it with my NEC to build support then the C suite.	Very helpful. I like that the work is done and It is generic.	
<b>Did the case change your position on implementation of CNLs into your hospital?</b>	<b>Did the case change your position on implementation of CNLs into your hospital?</b>	<b>Did the case change your position on implementation of CNLs into your hospital?</b>	
Extremely so	Extremely so	Extremely so	100%
Yes it is well done with contemporary examples	Our HCAHPS and Quality scores need a boost and a long term intervention. This sounds like what we need.	I like the differentiation between the CNL and CNS. It is important.	
<b>Would the case persuade your Executive team or Board of Directors?</b>	<b>Would the case persuade your Executive team or Board of Directors?</b>	<b>Would the case persuade your Executive team or Board of Directors?</b>	
Likely with some customization	Extremely so	Extremely so	92%
<b>Do you see this role as part of a care delivery/practice model change?</b>	<b>Do you see this role as part of a care delivery/practice model change?</b>	<b>Do you see this role as part of a care delivery/practice model change?</b>	
Yes definitely	Once the pilot is finished I would enter into a larger care model revision.	I believe so. It could be local for the pilot or larger in scope.	
<b>What would improve the case?</b>	<b>What would improve the case?</b>	<b>What would improve the case?</b>	
The case is fine, the initial investment may be a problem.	I would need to map out a selling strategy for my organization	I will need to see what expenses I can trade off in resources to get started.	

*Appendix L*

## Project Cost

<b>General Expenditures</b>	Cost
Administrative costs (telephone, internet, workspace)	\$ 150.00
Miscellaneous (mailing, printing)	\$ 50.00
<b>Training Resources</b>	
Materials for CNL class	\$ 50.00
<b>Travel to Present Class and Meet with CNOs</b>	
Round Trip airline	\$ 540.00
Hotel, lodging	\$ 400.00
Rental Car	\$ 300.00
Miscellaneous (transportation to airport, meals)	\$ 200.00
<b>Total Cost</b>	<b>\$ 1690.00</b>