


Summer 8-3-2017

Implementing for Success and Sustainability

Michele Paulo
redndoc@sbcglobal.net

Follow this and additional works at: <https://repository.usfca.edu/dnp>

 Part of the [Educational Methods Commons](#), and the [Other Social and Behavioral Sciences Commons](#)

Recommended Citation

Paulo, Michele, "Implementing for Success and Sustainability" (2017). *Doctor of Nursing Practice (DNP) Projects*. 95.
<https://repository.usfca.edu/dnp/95>

This Project is brought to you for free and open access by the Theses, Dissertations, Capstones and Projects at USF Scholarship: a digital repository @ Gleeson Library | Geschke Center. It has been accepted for inclusion in Doctor of Nursing Practice (DNP) Projects by an authorized administrator of USF Scholarship: a digital repository @ Gleeson Library | Geschke Center. For more information, please contact repository@usfca.edu.

Implementing for Success and Sustainability

Comprehensive Project Report

A. Michele Paulo

University of San Francisco

Committee Members:

Leanne Hunstock, DNP, RN, MEd, MBA, NEA-BC, CPHQ

Marjorie Barter, EdD, RN, CNL, CENP

July 24, 2017

Table of Contents

Section I. Title and Abstract

Title	1
Abstract	5

Section II. Introduction 6

Problem Description.....	6
Available Knowledge.....	7
Engagement and Communication.....,	7
Implementation Strategy.....	9
Analysis.....	10
Rationale.....	11
Specific Aims.....	12

Section III. Methods..... 13

Context.....	13
Intervention.....	14
Study of Intervention.....	22
Measures.....	23
Analysis	24
Ethical Considerations	24

Section IV. Results 25

Pre - Implementation	25
Post - Implementation	25
Summative	26

Table of Contents (cont.)

Section V. Discussion 27

 Summary 27

 Interpretation 28

 Limitations 30

 Conclusions 30

Section VI. Other Information 31

 Funding 31

Section VII. References 32

Section VIII. Appendices

 Appendix A: Evaluation Table 36

 Appendix B: Evidence Synthesis Table..... 41

 Appendix C: Identify and DRIVE Overview 43

 Appendix D: Identify FAQ..... 46

 Appendix E: Design FAQ..... 47

 Appendix F: Reach and Revise FAQ..... 49

 Appendix G: Implement FAQ..... 50

 Appendix H: Value FAQ..... 51

 Appendix I: Evaluate FAQ..... 52

 Appendix J: Gap Analysis 53

 Appendix K: Project Implementation Gantt 54

 Appendix L: Work Breakdown Structure..... 55

 Appendix M: SWOT Analysis..... 56

Table of Contents (cont.)

Appendix N: Responsibility/Communication Matrix..... 57

Appendix O: Identify and DRIVE Framework Budget Template59

Appendix P: Cost Benefit Analysis Template 60

Appendix Q: Cost Avoidance/Benefit Analysis 61

Appendix R: Formative Evaluation-12 item User Perception Survey 62

Appendix S: Summative Evaluation- CISIES post-implementation Survey..... 64

Appendix T: Formative Results -12 item User Perception Survey 66

Appendix U: CISIES Summative Evaluation 67

Abstract

Nurses, including those with additional education and training as professional development specialists, face challenges to implementing evidenced-based practice changes effectively and efficiently. Nurse bedside performance can drift away from evidence-based practice (EBP) and revert to methods previously taught when the strategy, planning and implementation lacks resources to support sustainable change. While knowledge and skills attainment are important, they do not ensure the successful transition in practice change at the point of care. An intervention has been developed that integrates several evidence-based implementation concepts and frameworks into a single framework named the Identify and DRIVE framework. Additionally, the Identify and DRIVE framework has been augmented with the development of specific tools to guide and support the essential elements required when planning for education and implementation of EBP change at the bedside. The Identify and DRIVE framework and tools have effectively identified and addressed gaps that previously led to struggling initiative implementations and threatened performance improvement success and sustainability. The formative and summative evaluations indicate successful user acceptance and affirm applicability to successful implementation of changes in professional practice.

Keywords: behavior, knowledge, change, readiness assessment, education, successful implementation

Implementing for Success and Sustainability

Section II. Introduction

Problem Description

Performance improvement strategies are implemented with the intent to improve safety or quality by making changes to processes, procedures, protocols, or products. An outcome data indicator generally measures the success of the practice change and thereby, the effectiveness of the implementation process. An assessment of facility and program or process readiness for implementation may or may not be completed. Consequently, failure in performance may be attributed to failure of the implementation and may be attributed to a single process step. Frequently, the failure to change is attributed to ineffective education.

Healthcare systems implement evidenced-based practice to improve the quality of health care provided. To identify and implement evidenced-based practice at the appropriate time, with the appropriate engagement, with minimal complications or barriers, not only impacts quality of care, but also impacts the people in the organization, their inner-connected relationships, and reduces the need for additional or duplicative efforts and revisions. Studies cite as much as a 30% reduction in healthcare costs when evidenced-based care is implemented to reduce complications (“Nurses struggle,” 2012).

Currently, there is no straightforward measure of the cost of repeating the implementation process, but the cost of error, mistake, and repeated resource use can be discretely measured. As an example, there is significant resource and focus on infection prevention performance improvement in the healthcare system. The Northern California region, consisting of 21 acute care medical centers, has reported an average of 32 hospital-acquired infections per year, per

facility, with associated medical malpractice arbitration agreements of \$38,000 per episode. In addition, the organization's proprietary internal quality and reporting web site reports each infection added between one and four additional hospital days, at approximately \$2200 per day in unbillable charges, and associative mortality of 5-16% (Northern California Quality, n.d.). Repeating training or education has been insufficient in correcting practice gaps in evidenced based practice implementations, such as measures to prevent hospital acquired infection.

Available Knowledge

In registered nurses (RN) working in a large medical center, how does a comprehensive evidence-based change of practice implementation plan (includes a facility readiness assessment) compare to only RN education affect successful implementation of a practice change over 3 months? To facilitate an efficient and effective search, limitations for English language and date of publication within previous 5 years, were used, although consideration for older publications based on relevance was considered. Studies included for consideration did not require health care focus, but did require critical appraisal of approach to implementations with evaluation of implementation measures to determine success. For this review, studies were chosen and grouped as they addressed the following three elements to successful implementation: engagement and communication, implementation strategy, and analysis. The evidence in this paper was critically appraised using the Johns Hopkins Research Evidence Appraisal Tool (Melnik & Fineout-Overholt, 2015).

Engagement and communication. Akin and Benghu (2013) studied the engagement of frontline providers in the primary health care of pregnant women in Nigeria, prior to planning a discrete and sustainable program for prenatal and preventative care. A focus group of nine midwives participated in an in-depth interview, representing both urban and

rural perspectives. Interviews by the primary author followed an integrated framework with model questions, within twelve defined and observable domains, credited to a 2005 theory of successful implementation of evidence-based practice by Michie et al. (as cited in Akin & Benghu, 2013). Initially, the midwives believed change could not come from them but would need to come from their leaders. However, after review of the study findings related to their performance, the midwives determined the solution to successful program implementation was their involvement at each phase of the program progression. To effect positive change, the midwives recommended strategies focused at the community, the government, and themselves. Akin and Bengu developed a cross-walk of these results to those of previous studies that also recommend strategies aimed at social and environmental factors, organizations and workers. The recommendations of Simon and Canacari (2012) align with the results of this study through use of lean approach tools and guides that rely on relationships and communication amongst the teams of people to effect positive change. The study received a level rating of III and a quality rating of good using the Johns Hopkins Research Evidence Appraisal Tool (Appendix A).

Tolson, McAloon, Hotchkiss and Schofield (2005), in a two-year study of nurse participation in implementation of evidenced-based practice, interviewed fifteen nurses to determine the impact of online education and the impact of program participation on personal approach to the provision of patient care. The results of the interviews cited value in development of electronic learning systems, more so for those geographically separated as opposed to those close in proximity. When supported by managers, use of electronic learning was a successful means to support culture change. The study incorporated a new vision of caring into the nurses' practice, whereby their own beliefs

and the patient experience inspire the desire to change practice. The study received a level rating of III and a quality rating of good using the Johns Hopkins Research Evidence Appraisal Tool.

Implementation strategy. Fulton, Lyon & Goudreau (2010) reference Joshi and Bernard (1999), in a manual for clinical nurse specialists. Joshi and Bernard (1999) assessed the application of the principles of continuous quality improvement (CQI) to programs aimed at disease management, to address the gaps to successful implementation of evidence-based programs designed for improved clinical effectiveness. Traditional focus on education and guidelines has left a notable gap, providing the weakness where failure of implementation is inevitable. Citing the two-year history of the University of Pennsylvania Health System (UPHS) with 28 programs and over 14,000 patients, the approaches used combine CQI principles with disease management to implement evidenced-based healthcare improvements or changes. The model defined four interconnected links to successful implementation: “Design Best Practices, Influence/Clinician Decision Making, Deploy and Deliver Best Practices, and Improved Outcomes”. As part of a series, this article illustrated clinical performance improvement through strategically focusing resources dedicated to obtaining physician engagement and evaluating implementation and use. The study received a level rating of II and a quality rating of high using the Johns Hopkins Research Evaluation Appraisal Tool.

Wallen et al. (2010), in a quasi-experimental study using mixed methods and designs, found trained mentors significantly impacted the success to evidenced-based practice implementations. Citing similar studies, the researchers concluded that mentors positively influenced nurse beliefs regarding the practice change and the

organization's commitment to the change. In addition, stronger cohesive bonds, a predictor for retention rates, also impacted implementation of evidenced-based practice changes. The study received a level rating of II and a quality rating of high using the Johns Hopkins Research Evaluation Appraisal Tool (Appendix A).

Brose et al. (2015) determined the implementation of evidenced-based practice changes can be improved through training and use of treatment manuals for practitioners. The four-week regression analysis focused on smoking cessation success rates as impacted by practitioner use of a manual, the practitioner perception of the usefulness of the manual, and practitioner training on the content and use of the manual. When adjusted for demographic and professional characteristics, the implementation of manuals did not provide a statistically significant impact on implementation success and smoking cessation outcome rates. In addition, the study results relied on self-report. The authors cited evidence of over-report and discrepancy from practitioners regarding the delivery of care or services. The study received a level rating of II and a quality rating of good using the Johns Hopkins Research Evaluation Appraisal Tool (Appendix A).

Analysis. Catchpole, Sellers, Goldman, McCulloch, and Hignett (2010) found learning, innovative use of technology, and analysis of data led to identification and mitigation of existing and future threats and weaknesses. In a qualitative design study, letters to Formula 1 motor racing teams were used to elicit responses to expand existing comparisons of the organized racing team pit stop to a patient hand-off. Using data from this and previous studies of motor racing teams; a conceptual framework was developed for subsequent analysis of data regarding inpatient care in hospitals. Analysis of the data further provided evidence to support personal, professional and organizational factors as causes of unsafe practices leading to poor quality and

safety of patient care. Approaches to implement evidenced-based healthcare improvements or changes must incorporate measuring outcomes to improve the process. In addition, notably, the study identified technology as one key element to data analysis and improving performance, not the solution. The study received a level rating of III and a quality rating of good using the Johns Hopkins Research Evidence Appraisal Tool (Appendix A).

Rationale

The conceptual framework for this review is based on learning theory and behaviorism. Learning theory seeks to explain how people learn, resulting in sustainable change in performance or potential change in performance related to the learner's exposure in the environment. As one of three main categories of learning theory, behaviorism focuses on the observable or measurable aspect of learning and may be further grouped into classical (Pavlov) or operant (Skinner) conditioning (Owen, 2002). Classical conditioning is the learning process whereby a response to a stimulus occurs where it was previously not provoked by the same stimulus. Coupled with operant conditioning, where a behavior is controlled by its consequences, behaviorism assumes behavior change is a result of learning, the environment, and reinforcement and proximity (Owen, 2002).

When applied to learning development, obligatory use of the learning theory falls short of ensuring successful learning and transfer to practice. While reinforcement of behavior increases the likelihood of reoccurrence, according to learning theory; supplementing additional principles and approaches creates a conceptual framework to convert cognitive learning of knowledge into improved performance and application in practice (Wick, Pollock, & Jefferson, 2010). This supplemental framework uses define, design, deliver, drive, deploy, and document,

the six “Ds”, to efficiently turn training into business practices. This framework is inconsistently applied in the hospitals within the Northern California Region.

Originally conceptualized by Melnyk in 1999 (Melnyk & Fineout-Overholt, 2015), ARCC[®] (Evidenced Based Advancing Research and Clinical Practice through Close Collaboration) provides in depth knowledge of evidenced based practice, including the knowledge and skills required to implement practice changes. The framework is rooted in control theory, used by Herschi and Reckless (Mansell & Marken, 2015), in the 1960-70’s, where behavior was motivated by the identification of a gap between current practice and the identified desired state of practice. Melnyk incorporated the use of highly trained mentors as the change agents facilitating individual and organizational change strategy. Mentorship skills are foundational to ARCC[®]. The hospitals within the Northern California region use mentors and preceptors for specific initiatives or on-boarding processes, but do not apply their success widely to ensure success of all initiatives.

Specific Aim

The deliverable for this project was the development and implementation of a framework of tools (termed the Identify and DRIVE framework) that effectively guides an evidenced-based practice change, beyond education and into successful implementation, in a reliable and repeatable manner. Education and checklists have been shown to improve process sustainability (Verdaasdonk, Stassen, Hoffmann, van der Elst, & Dankelman, 2008). Wallen et al. (2010) cite change is supported through use of mentors as resources. The Identify and DRIVE framework provides a collection of instructions and tools to enable identification of the current and desired state of practice. This essential step enables effective planning for the appropriate methods to address gaps and successfully change practice and performance. After this

identification, the framework guides planning and drives the implementation and evaluation of the practice change. The development of the framework combined and adapted existing frameworks, thereby filling the gaps from any one framework in use. The facility Directors of Education and Informatics learn the Identify and DRIVE framework and tools, which are then applied to a pending practice change, and evaluated by the directors for applicability and readiness for implementation of practice change post application of the Identify and DRIVE framework, at their facility level.

Methods

Context

The healthcare system is organized into five regions, of which the Northern California (NCAL) Region consists of 21 acute care medical centers. NCAL has a regional leadership structure that closely mirrors local leadership structures. Specific to the Patient Care Services (PCS) division of patient care operational oversight, there are regional and local Chief Nurse Executives (CNEs), Service Line Directors and Program Managers. Regional leaders collaborate with physicians, quality specialists, and consultants to define patient care initiatives for implementation by each medical center. In some cases, there is a plan for pilot and spread, while other cases are implemented fully, across the region of medical centers. Some implementations may be considered a pivot of focus or activity from a previous implementation to a changed performance expectation. There is variable regional support for each initiative implementation, regardless of status as pivot or classification as new.

At the facility level, several initiatives are in various stages of planning and implementation, at any given time. The CNE, in collaboration with physicians, quality, and ancillary departments, is challenged to manage the resources required for each initiative, while

supporting the leadership team's expectations as well as the expectations for successful implementation and sustainability of the initiatives. The Directors of Clinical Education Practice and Informatics (DCEPI) report to the CNE and provide support for education, training, and onboarding, in clinical and informatics arenas, for the patient care staff at the medical center. The DCEPIs have influence in all patient care service lines: peri-operative, adult, maternal-child, and emergency. They are the primary clinical contact for most initiatives impacting patient care. The DCEPIs are trained and experienced in multiple theories and frameworks for education and implementation. However, the volume of initiatives within their education and implementation portfolios, combined with the variety of sources of the initiatives, results in non-standard and incomplete inadequate resources for successful implementation and sustainability. When the education plan included in the initiative is viewed in isolation, the design of the strategy, support, planning, and implementation lack resources to support sustainable change. When the education or training is separated from other elements required to sustain the change required by the initiative, the bedside performance reverts away from evidence-based practice and returns to methods previously taught, thus the probability of sustainability is lost. While knowledge and skills attainment are important, they do not ensure a successful transition to change in practice, at the point of care. Consequently, the expectations for the initiative return to the DCEPI for re-education, the assumptive reason for failure in sustainability.

Interventions

The NCAL Regional DCEPI leads the monthly peer group meeting for the facility DCEPIs. The Identify and DRIVE framework and tools were developed through review of the existing knowledge and review of the evidence (Appendix B). The Identify and DRIVE framework and tools were presented at a peer group meeting, with approval for implementation

and application to organizational future initiatives. Coordination of planning elements into a concise single program or process builds a sustainable approach, which must include communication, advanced planning and engagement at multidisciplinary levels, evaluation of processes and outcomes, revision of protocols, policies, and processes, and use of data as a driver (Joshi & Bernard, 1999). Immediate or short-term approaches to implementations do not build sustainable practice advancement, regardless of evidence to support the practice change. Practices must incorporate fundamental elements to ensure success, such as standardization, interpersonal communication, consistency and continuous development (Catchpole et al., 2010). Critical evaluation of worker, workplace, and workflow must accompany plans for implementation of evidenced-based practice. While training materials alone do not ensure success, supplemental resources increase success rates. Implementation plans and strategies must include frontline worker engagement for success. RNs, like other learners, use comprehensive evidence-based change of practice implementation plans, supplemented with individualized facility assessments, to successfully implement a practice change.

The Identify and DRIVE framework and tools support successful implementation through use of six phases of focused work. The framework may be used beginning at any one phase, but is most efficiently used in order: Identify, Design, Reach and Revise, Implement, Value and Evaluate. An interactive overview version provides easy tracking of each phase according to three determinants of success – focus on worker, workplace, and workflows. Each phase includes several tools or templates and Frequently Asked Questions (FAQ) that illuminate and prompt the facilitator to identify needs to address to complete planning for the phase. Each determinant of success is defined by key overview descriptors to prompt completion for the phase. When completed, the interactive version changes the determinant to green, indicating the details have

been addressed. Each red, or outstanding, determinant must be addressed or supplemented to ensure a successful implementation plan. The overarching intent of using the Identify and DRIVE framework for instructional design is to address learner needs at each stage of learning: prepare, learn, transfer and achieve (Gaglio, et al., 2013; Appendix C).

The first phase of the framework is Identify, or to identify the gap between current and desired performance and behavior. This phase is key to development and design of a strategy that is effective to change practice. Skipping this step leads to solutions that do not address the actual cause for the need for performance improvement, and thus do not resolve the performance measure results. The worker is carefully assessed for ability (knowledge, skills and attitude) to perform the desired behavior. The workplace is critically evaluated for presence and ease of access to supplies or materials needed to support desired practice. Workflows depict current and desired state to indicate where changes are needed to support practice change. In this phase, identification of key stakeholders and work streams set a foundation for accountability and responsibility for roles in the initiative implementation. The supplemental FAQ prompts the identification of the appropriate target audience(s), current practice state, desired practice state, and identification of the gap in practice (Appendix D). Gap assessment, workflow and work stream identification tools effectively meet the elements in the FAQ.

Design is the approach to closing the gap between current performance and desired performance. In the Design phase, worker preparation is the focus, clearly stating start and end times, where appropriate for pilot, for example, definitions and terms outlined clearly, development of the implementation strategy or plan, identification of oversight roles and responsibilities, and formation of a playbook, as deemed appropriate. In the design of the workplace, roles and responsibilities of team members and oversight leaders are clearly outlined

and defined. In the workflow design, the communication plan provides needed support for the initiative success. The design FAQ focuses on development of the instructional approach but also extends to communication plans, audience identification, roles and responsibilities, oversight, inclusion and exclusion criteria, thresholds for completion or success, and return on investment (Appendix E). Content, audience and peer group identification, and return on investment calculations support the element of the FAQ for this phase.

Design may be readdressed in the reach and revise phase of the Identify and DRIVE framework. Content is delivered according to worker learning methods, to best achieve desired behavior and includes the “Why” for the practice change, opportunity for practice or simulation, and collection of feedback or fears of practice change. Within the workplace and workflow, there is attention to identification and definition of resources to support practice change and performance expectations, supplies are present and accessible, and support and individualization accommodate the unique culture at the local level. Revision is common at this stage, as needed to support behavior change and mitigate fears. The FAQ for the Reach and Revise phase provides an opportunity to review the many facets of this phase for inclusion, wide audience communication and revision according to feedback and statements from fear or concern that can derail an initiative implementation (Appendix F). Calendars, Gantt charts, and revision to previous tools effectively address the elements of the FAQ for this phase.

The Implementation phase is focused on the designed systems and processes to support transfer of practice change to bedside practice in a reliable manner. For the worker, success is supported through completion of learning prior to implementation. In addition, report of readiness to implement, or change, by the end user or worker, leads to success. A robust communication plan ensures key stakeholders and staff are together. In the workplace, the

oversight method must be in place, with coaching and behavior reinforcement in place.

Workflows and systems effectively support the transfer of learning to application, drive the change process, communicate education completion tracking and employ support via the electronic health record. The communication strategy, education completion, process measures and outcome measures are reflected in the FAQ for implementation (Appendix G). Roles and responsibility documents, reports of education completion and policy, as needed, effectively support the elements of the FAQ for implementation.

In the Value phase, there is plan for milestones and celebrations for key metrics met. Workers celebrate adoption and share experiences peer-to-peer, further supporting change in practice. The workplace must support peer-to-peer sharing and accountability to assist driving practice change from the staff level, supporting the evidence and professional practice. Workflows and systems support on-going learning as a message of life-long learning, engaging a core set of experts to reliably support and coach. The celebrations, peer to peer learning and coaching, core of experts and management of frequency of change requests are reflected in the FAQ for Value (Appendix H). Dissemination of talking points supports the elements of the FAQ for the Value phase.

Evaluate is the phase of Identify and DRIVE where there is critical evaluation of end user competency, knowledge, skills and attitude. Evaluation is essential for a sustainable and reliable implementation of the identified practice change into bedside practice. Workplace, workflow and systems communicate maintenance of results with reporting database alignment. Process metrics and outcome metrics are key evaluative tools, but comparison of actual results to expected results provides the information required to fully evaluate the practice change. Evaluation of remaining fears, as barriers to practice change, and outcomes, provide additional evaluation

points reflected in the FAQ (Appendix I). At this phase, additional factors that obscure or invalidate the initiative must be addressed.

The overarching intent of instructional design is to address learner needs at each stage of learning: Prepare, Learn, Transfer and Achieve (Gaglio, et al., 2013). The DCEPIs have previously used classic quality improvement techniques such as PDSA (Plan-Do-Study-Act) (Audette et al., 2017) and then transitioned design of education programs to the Six Disciplines of Breakthrough Learning (Wick, Pollock, & Jefferson, 2010). For each of six elements, the Six Disciplines approach uses an assessment tool to identify areas of the program in need of additional work, to predict success and sustainability. However, the approach has left a gap between design and delivery, at the center of the implementation. The Reach Effectiveness-Adoption Implementation and Maintenance (RE-AIM) framework has been used in the organization (Gaglio, Shoup & Glasgow, 2013). This approach has highlighted disparities in identification of the focus of the performance gap, as well as design of the appropriately matching and effective solution. While both approaches to instructional design have provided ability for the DCEPI to accommodate learner phases of change, an adaptation from Kubler-Ross phases of grief, neither has provided an easily implementable, sustainable, and replicable framework for implementation of initiatives (Global, 2017). A visual representation and crosswalk of the tools and frameworks illuminates the gaps (Appendix J).

Implementation of the Identify and DRIVE framework and tools began with an introduction of the concept to the Regional DCEPI group. The next key step was to obtain DCEPI buy-in to the introduction of another implementation framework, at their peer group meeting. With their approval and energetic support, a half-day of their approaching peer group meeting was reserved for the Identify and DRIVE framework and tools presentation and

application to a pending initiative. Consultants were taught the Identify and DRIVE framework and tools as preparation for their role in the DCEPI peer group. At the peer group meeting, the framework presentation followed with a group application to a pending initiative. During the application of the framework, the consultants facilitated group work and transcribed content into the tools of the framework. The framework was evaluated through formative and summative surveys of the DCEPI group (Appendix K). The Identify and DRIVE framework phase deliverables are broken down in a more precise and concrete presentation, so that the project team knows exactly what must be accomplished within each deliverable (Appendix L).

As director or manager level leaders of education, practice and informatics, in each facility, the DCEPIs possess a unique strength in influence across all service lines at the medical centers. They have multi-disciplinary relationships that are foundational to successful practice change implementations. Unfortunately, resources across medical centers vary as do the knowledge or responsibility of ownership by key partners in implementation. The DCEPIs currently conduct literature review for policy and practice standards, but have opportunity to expand literature review beyond policy and into evidence to support all requests for change in practice, educational programs, and re-education requests. Wider use of literature review can support application of appropriate solutions that will address the identified gap(s) in performance. Inherent to the culture of a large healthcare system, multiple competing priorities and initiatives can dilute needed focus for a successful initiative implementation. A SWOT analysis was performed to identify those elements that could affect the success of the implementation (Appendix M).

The responsibility/communication plan is individualized for each initiative in which the Identify and DRIVE framework and tools are applied. At a minimum, nursing leadership,

physician leadership, and ancillary leadership, such as infection control for hospital acquired infection prevention initiatives, for example, shares responsibility and accountability. Multi-disciplinary committees play a key role in disseminating information and responding to data at the local level, comparing to the performance regional data. Regional leadership provides consultation and contribution, as well as accountability for some performance when there is an established local to regional reporting structure, as is in place for Infection Prevention (Appendix N).

The budget for use of the Identify and DRIVE framework is calculated individually and specifically for each application of the Identify and DRIVE framework and tools. Preparation time can vary depending on baseline knowledge and need for research or practice literature review. The focus of the preparation is determined in the Identify phase. Each discipline, as stakeholders involved or impacted by the initiative implementation, must account for their preparation time. Education and communication design is calculated by the average wage rate, including tax burden, of the preparer(s) / educators / DCEPI, multiplied by the number of hours required, per person. The costs of implementing use of the Identify and DRIVE framework and tools are calculated based on the approximated time per week of one hour to prepare each of the six elements of the Identify and DRIVE framework multiplied by the wage of the stakeholder. Physician, unit nurse leader, clinical staff and support for project management, when available, each have a time cost associated with preparing for a successful implementation of a practice change. Preparation using the Identify and DRIVE framework and tools takes approximately twelve weeks from identification of performance gap to onset of evaluation of the practice change. Ongoing support for approximately eight weeks after the implementation go-live

supports staff to transfer knowledge and skills to bedside practice and sustain performance (Appendix O).

Nurses are the primary source of practice change and the cost of their training time is calculated by multiplying the average wage rate, including tax burden, by the number of hours of education per nurse. Annual education or recurring education costs must be added. The costs of supplies and materials must also be added. Most patient care initiatives are improvements to the provision of patient care; thus, the potential avoidable costs must be included in calculation. The cost/benefit analysis is the result of the calculation of the investments and avoidable costs (Appendix P).

Using the Identify and DRIVE framework and tools provides a quantifiable benefit to the organization. The costs of the initiative implementation are compiled and compared to the cost of potentially avoidable costs, in the return on investment. A potentially avoidable cost is assumed to be attributable to either not implementing the practice change or to a failed or unsuccessful implementation. The proposed budget accounts for the planning costs incurred by using the Identify and DRIVE framework to bring together a complete package for successful implementation of the practice change. The benefit analysis may be quantified by adding the costs of implementing the practice change to the costs of preparation using the Identify and DRIVE framework compared to the potentially avoidable costs. With the reduction of one infection in one medical center, the costs of the implementation are recouped. With a reduction of two infections, the return on investment is almost three to one and rises to almost seven to one with a reduction of five infections (Appendix Q).

Study of Interventions

Studies have shown many types of learners require attention to relationships, engagement, and resources to drive change. This needs to be followed by evaluation and revision as needed, to implement knowledge and skills into practice (“Nurses struggle,” 2012). Internationally, studies show less than desirable success rates when education and training alone are used to spear change (Akin & Benghu, 2013). Knowledge and skills alone are not shown to drive practice change or improve performance. Evaluation of several frameworks for successful implementation, practice and performance change demonstrate a considerable overlap in elements that contribute to success. In fact, lack of protocols, training or guidelines, communication, or strategic coordination led to threats to patient safety instead (McPheeters, et al., 2012).

Use of a formal framework to bring together a complete package for implementation of a practice change impacts an organization positively, as leaders and staff value a planned, inclusive and methodical approach to change which then results in a sustainable practice change. The primary approach used for assessing the impact of the intervention is a survey of the perceptions of the leaders responsible for the initiative implementation. In addition, leader perception of facility readiness reflects the successful use of the Identify and DRIVE framework.

Measures

As a formative program evaluation, a simple 12-item survey (Appendix R) was used to assess the end user/practitioner perceptions (Légaré et al., 2014). The survey was administered at the beginning of the Identify and DRIVE education session, prior to any instruction on the framework or tools, and repeated at the end of the session, after instruction and application of the tools to a pending initiative implementation. After continuing professional development program

delivery, the tool assessed beliefs about capabilities, social influences, beliefs about consequences, moral norm, and intention as either ‘strongly agree’ or ‘strongly disagree’. The survey has shown validity and reliability for routine assessment of the impact of educational program planning on intention to change behavior. The survey is within an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited. The surveys were administered via polling software. The questions were projected and read aloud. The respondents, the DCEPIs, responded anonymously by texting their responses to each question.

The summative, or post- presentation evaluation for perception of ability to apply the framework locally and rate facility readiness, was the Clinical Information System Implementation Evaluation Scale (CISIES). CISIES is a valid and reliable 34-item survey (Appendix S) that measures perception of satisfaction with the complete package of preparation for an implementation, including use of the electronic health record (McMullen et al., 2015). It has been adapted from the older CISQ version of the 1990s and is available to the public for small-scale use.

Analysis

Quantitative and qualitative inferences are drawn from the results of the formative and summative evaluations through comparison of percentage ratings for each question. The results show both an increase in perception and ability for the DCEPIs to lead practice change implementation through use of the Identify and DRIVE tools and framework. Data interpretation variations occur when respondents choose the ‘no opinion’ as the response rating. The polling software, used for the formative surveys, provides the engagement percentage, number of

respondents per question, and overall number of participants. The results are displayed both numerically and graphically. Healthstream, used for the summative evaluation, provides responses numerically and in exportable formats.

Ethical Considerations

The Identify and DRIVE framework and tools did not present an ethical issue or conflict of interest. The current reference to the framework as Identify and DRIVE does not infringe on copyright, as previous attempts at naming did overstep copyright. The intervention, Identify and DRIVE framework and tools used for evidenced based practice implementation planning and execution, supports the Jesuit values of Magis, Women & Men for and with Others, and Unity of Heart, Mind & Soul. Moreover, the intervention reflects the principle of Forming & Educating Agents of Change, where there is teaching of behaviors that reflect critical thought and responsible action on moral and ethical issues. Evidenced based practice changes, their implementation, and the formative responses indicating importance, benefit, and intent demonstrate the incorporation of drive to improve the care we provide and grow or advance nursing practice. Results from the responses to the formative and summative surveys were reported without identification of respondent. Responses were not linked to respondents nor were respondents linked to responses.

Results

Pre -Intervention

In the pre- intervention formative survey, 84% of the DCEPIs engaged consistently in the completion of the survey questions. DCEPIs reported 64% personal ability to plan professional practice changes in their facilities. However, the DCEPIs reported less confidence, 40%, in ability to implement changes in practice successfully. The DCEPIs reported 54% of their

colleagues at their facilities understand their role in implementing a change in practice. Over 90% of the time the DCEPIs recognize the benefit to successful implementation of practice change and that planning is a key step to success. Respondents unanimously agreed, 100%, that implementation of evidenced based practice is acceptable, ethical and within their intent (Appendix T).

Post -Intervention

In the post- intervention formative survey, 91% of the DCEPIs engaged consistently in the completion of the survey. DCEPIs reported 100% agreement or strong agreement in their ability to successfully plan evidenced based practice changes. DCEPIs reported 100% agreement or strong agreement in their ability to successfully implement evidenced based practice changes. Unanimously, in this survey, 100% understand their role in implementation. They also reported 100% recognition of benefit and need to plan. Respondents unanimously agreed implementation of evidenced based practice is acceptable, ethical and within their intent (Appendix T).

Summative

The CISIES-post launch version was administered through Healthstream as the summative evaluation. The intent of this summative evaluation is to assess perceptions of readiness to implement practice change, with application of the Identify and DRIVE framework, at the facility level, by the DCEPIs. The survey groups questions into six groups: dependability, training, workload, patient care, design & troubleshooting, and teamwork plus an overall rating group. Healthstream randomly sorts the same questions into a random order of the questions, as each user logs in to the system.

The survey results assessed dependability of the Identify and DRIVE framework at 89%. In the training section, the DCEPIs rated with 78% agreement that the training session was

sufficient to implement the framework further. The questions in the workload grouping results indicated strongly, 89%, that the framework is more efficient than older methods used for practice change planning and implementation. The survey results for the patient care group indicated 89% agreement in the ability of the use of the framework to improve practice, enable better decision making about patient care, and improve patient outcomes. The survey questions related to design and troubleshooting indicated 67% agreement to the ability for the individualization and application of the Identify and DRIVE framework, to specific facility needs. The teamwork survey section results indicated 89% affinity between the DCEPIs and their local teams. Overall, the DCEPIs rated the framework 89% favorable (Appendix U).

Discussion

Summary

For registered nurses (RNs) working in a large medical center, a comprehensive evidence-based change of practice implementation plan (that includes a facility readiness assessment), compared to only RN education, provided the framework, tools and ability to successfully implement practice changes. This performance improvement intervention is a framework of tools describing essential elements to include when planning for education and program implementation to effectively drive change in bedside professional practice. The formative and summative evaluations indicate successful user acceptance and affirm applicability to successful implementations of changes in professional practice. The Identify and DRIVE framework is an incorporation of several frameworks into one set of tools that have effectively identified and addressed gaps that previously led to struggling initiative implementations.

Success of the Identify and DRIVE framework may be attributed to the attitudes of the

DCEPIs. Their frustration with failed practice change implementations, combined with the redundant requests for education to correct performance issues, provides a burning platform for need to change the way practice change is planned, implemented revised, and evaluated. Verbal feedback and input illuminates the common theme of lack of operational leader responsibility and accountability for performance or practice change. The Identify and DRIVE framework provides tools and templates to ensure there is clear outline of responsibility for each discipline impacted by the change in practice.

DCEPIs have emerging possible opportunity as they reflect on the roles, responsibilities, and relationships at their medical centers. Some DCEPIs have operational impact while others acquiesce into roles impacting only the delivery of education, knowledge and skills, instead of the complete package of preparation and planning for a successful patient care improvement. The framework and tools provide support to key project management and performance improvement skills.

Interpretation

Development of a framework of planning elements into a concise single program or process builds a sustainable approach, which must include communication, advanced planning and engagement at multidisciplinary levels, evaluation of processes and outcomes, revision of protocols, policies, and processes, and use of data as a driver (Joshi & Bernard, 1999).

Immediate or short-term approaches or implementations do not build sustainable practice advancement, regardless of evidence to support the practice change. Practices must incorporate fundamental elements to ensure success, such as standardization, interpersonal communication, consistency and continuous development (Catchpole, et al., 2010). Critical evaluation of worker, workplace, and workflow must accompany plans for implementation of

evidenced-based practice. While training materials alone do not ensure success, supplemental resources increase success rates. Implementation plans and strategies must include frontline worker engagement for success. Like other learners, RNs use comprehensive evidence-based change of practice implementation plans supplemented with individualized facility assessments to successfully implement a practice change.

The Identify and DRIVE framework and tools support the theories and frameworks of learning and change management. The DCEPIs are well positioned in the organization to take advantage of the Identify and DRIVE framework and tools for application to new initiative implementations. In addition, Identify and DRIVE may be applied to an initiative with struggling performance, to determine the gaps and to structure applicable solutions.

The summative CISIES evaluation results indicated strong agreement for the accuracy of the framework and its ability to reduce errors. The training session was reported as sufficient to implement the framework further and the DCEPIs indicated their confidence in ability to assist others to use the framework. Moreover, the responses point toward their affirmation of enough available resources to learn and use the framework (Appendix U).

The questions in the workload and in the patient care grouping resulted in important information, considering the context of the DCEPI role and responsibilities, within the region. There was strong indication that the framework is more efficient than older methods used for practice change planning and implementation. In addition, about two-thirds of the DCEPIs felt strongly that use of the framework avails time to devote to alternative aspects of patient care and did not add additional stress to their role and responsibilities. The workload responses illuminate the intent to adopt the framework for efficient and successful planning of evidenced based practice changes, without raising stress or consuming additional time, thus availing time for

alternative patient care provision needs. The patient care group of survey questions further illuminates the adoption of the Identify and DRIVE framework. The survey results indicate agreement in the ability of the use of the framework to improve practice, enable better decision making about patient care, and improve patient outcomes.

The teamwork survey section results indicated a strong affinity between the DCEPIs and their local teams. Communication and team participation were rated high and respondents felt strongly that they would be able to support others in their role and responsibilities in an implementation package using the Identify and DRIVE framework. There was an even distribution of responses regarding perception of time requirements, indicating diversity across the region, at the local levels, of roles and resources.

The survey contains negatively and double negatively worded statements. The DCEPIs were cautioned to carefully read these statements. However, the results for these statements, in all categories, show a relative even distribution across all response categories. The flattening of the response ratings does not present interpretable information. Overall, the DCEPIs rated 89% agreement or strong agreement that the framework has been effective and efficient. The same rating, 89% agreement or strong agreement, was applied to their commitment to the successful use of the Identify and DRIVE framework.

Limitations

The greatest limitation to dissemination or use of the Identify and DRIVE framework and tools is local facility culture. As reflected in the formative evaluations, there is wide discrepancy in the understanding and ownership of their role in implementation by individual leaders. While there are tools for roles and responsibility grids, used to clearly define and communicate, the DCEPIs report variation in their ability to obtain engagement outside their sphere of control. As

delineated, engagement is one key foundational element required for success. Engagement is not limited to structures of control, but extend to those areas of influence. The DCEPIs, through the Identify and DRIVE education session, reflected and shared successes and opportunities to further engage operational and physician leaders.

Conclusions

The DCEPIs widely shared their positive response to the Identify and DRIVE framework and tools. Immediately upon closure of the session, multiple written requests for the distribution of the framework and tools were made, for the DCEPIs to immediately re-assess existing struggling initiatives at their facilities. Additionally, ancillary leaders requested presentation and permission to use the Identify and DRIVE framework and tools: infection control practitioners, maternal child service line clinical practice consultants, risk and patient safety consultants, clinical effectiveness consultants, quality consultants, and patient care services consultants. The framework has been applied to long-term/multi-year implementations and has identified several areas of key support needed to ensure sustainable change in performance by the bedside nurses. Resources for support, oversight, and clearly established roles and responsibilities were the areas of gaps identified most frequently. These areas have been addressed and there is report of rapid smooth implementation and sustainable changes in practice for the initiatives. The initiatives continue to successfully spread.

Other Information

Funding

There were no sources of funding for this intervention. All time allotted to the intervention development, implementation and measurement were incorporated into existing pay and employee structures.

References

- Akin-Otiko, B. O., & Bhengu, B. R. (2013). Appraisal of observance of behaviour change communication programme for maternal and child health at first level of midwifery practice in kaduna state Nigeria. *Nursing and Midwifery Studies*, 2(3), 28.
- Audette, J. G., Baldew, S.-S., Chang, T. C. M. S., de Vries, J., Ho A Tham, N., Janssen, J., & Vyt, A. (2017). Utilizing the “Plan, Do, Study, Act” Framework to Explore the Process of Curricular Assessment and Redesign in a Physical Therapy Education Program in Suriname. *Frontiers in Public Health*, 5, 69.
<http://doi.org/10.3389/fpubh.2017.00069>
- Brose, L., McEwen, A., Michie, S., West, R., Chew, X., & Lorencatto, F. (2014). Treatment manuals, training and successful provision of stop smoking behavioural support. *Behaviour Research and Therapy*, 71, 34-39.
- Catchpole, K., Sellers, R., Goldman, A., McCulloch, P., & Hignett, S. (2010). Patient handovers within the hospital: Translating knowledge from motor racing to healthcare. *Quality and Safety in Health Care*, 19(4), 318–322.
<http://doi.org/10.1136/qshc.2009.026542>
- Fulton, J. S., Lyon, B. L., & Goudreau, K. A. (2010). *Foundations of clinical nurse specialist practice*. New York: Springer.
- Gaglio, B., Shoup, J. A., & Glasgow, R. E. (2013). The RE-AIM framework: a systematic review of use over time. *American Journal of Public Health*, 103(6), e38–46. <http://doi.org/10.2105/AJPH.2013.301299>

- Global, L. (2017). The 7 emotional phases employees go through during change.
Retrieved from <http://www.lamarsh.com/the-7-emotional-phases-employees-go-through-during-change/>
- Joshi, M. & Bernard, D. (1999). Clinical performance improvement series. Classic CQI integrated with comprehensive disease management as a model for performance improvement. *The Joint Commission journal on quality improvement* , 25 (8), 383-95.
- Légaré, F., Borduas, F., Freitas, A., Jacques, A., Godin, G., Luconi, F., & Grimshaw, J. (2014). Development of a Simple 12-Item Theory-Based Instrument to Assess the Impact of Continuing Professional Development on Clinical Behavioral Intentions. *PLoS ONE*, 9(3). <http://doi.org/10.1371/journal.pone.0091013>
- Mansell, W. & Marken, R.S. (2015). The origins and future of control theory in psychology. *Review of General Psychology*, (19), 425-430.
- McMullen, C., Macey, T., Pope, J., Gugerty, B., Slot, M., Lundeen, P., ... Carlson, N. (2015). Effect of computerized prescriber order entry on pharmacy: Experience of one health system. *American Journal of Health-System Pharmacy*. 72 (2). DOI: <https://doi.org/10.2146/ajhp140106>
- McPheeters, M. L., Kripalani S., Peterson N.B., Idowu, R.T., Jerome, R.N., Potter SA, & Andrews, J.C. Quality improvement interventions to address health disparities. Closing the quality gap: Revisiting the state of the science. Evidence Report No. 208. (Prepared by the Vanderbilt University Evidence-based Practice Center under Contract No. 290-2007-10065.) AHRQ Publication No. 12-E009-EF.

- Rockville, MD: Agency for Healthcare Research and Quality. August 2012.
www.effectivehealthcare.ahrq.gov/reports/final.cfm
- Melnyk, B. & Fineout-Overholt, E. (2015). *Evidence-based practice in nursing and healthcare: A guide to best practice*. (3rd ed.). Philadelphia: Lippincott.
- Northern California Quality and Regulatory Services. (n.d.). Retrieved from
<http://kpnet.kp.org:81/california/ncqrs/index.html>
- Nurses struggle to implement evidence-based practice. (2012, November 3). *Nurse.com*.
Retrieved from <https://news.nurse.com/2012/09/03/nurses-struggle-to-implement-evidence-based-practice-2/#prettyPhoto>
- Owen, J. (2002). A retrospective on behavioral approaches to human language – and some promising new developments. *American Communication Journal*, (5)3.
- Rappleye, E. (2015). Average cost per inpatient day across 50 states. Retrieved from
<http://www.beckershospitalreview.com/finance/average-cost-per-inpatient-day-across-50-states.html>
- Simon, R. W., & Canacari, E. G. (2012). A practical guide to applying lean tools and management principles to health care improvement projects. *AORN Journal*, 95(1), 85–103. <http://doi.org/10.1016/j.aorn.2011.05.021>
- Tolson, D., McAloon, M., Hotchkiss R. & Schofield I. (2005). Progressing evidenced-based practice: an effective nursing model? *Advanced Nursing*, 50(2), 124–133.
- Verdaasdonk, E. G. G., Stassen, L. P. S., Hoffmann, W. F., van der Elst, M., & Dankelman, J. (2008). Can a structured checklist prevent problems with laparoscopic equipment? *Surgical Endoscopy*, 22(10), 2238–2243.
<http://doi.org/10.1007/s00464-008-0029-3>

Wallen, G., Mitchell, S., Melnyk, B., Fineout-Overholt, E., Miller-Davis, C., Yates, J. &

Hastings, C. (2010). Implementing evidence-based practice: effectiveness of a structured multifaceted mentorship programme. *Journal of Advanced Nursing*, 66(12), 2761–2771. doi: 10.1111/j.1365-2648.2010.05442.x

Wick, C., Pollock, R., & Jefferson, A. (2010). *The Six Disciplines of*

Breakthrough Learning. San Francisco, CA: Pfeifer.

Appendix A: Evaluation Table

Citation	Conceptual Framework	Design/ Method	Sample/ Setting	Variables Studied and Their Definitions	Measurement	Data Analysis	Findings	Appraisal: Worth to Practice ***Johns Hopkins Research Evidence Appraisal Tool
<p>Akin-Otiko, B. O., & Bhengu, B. R. (2013). Appraisal of observance of behaviour change communication programme for maternal and child health at first level of midwifery practice in kaduna state Nigeria</p>	<p>2005 theory of successful implementation of evidence-based practice by Michie et al.</p>	<p>Quasi-Experimental Focus group in depth interview</p>	<p>9 midwives, Urban and rural Nigeria</p>	<p>Appraise the participation of midwives in first level health care prior to planning a sustainable program</p>	<p>Items from text were retrieved and arranged under each domain, by participant Knowledge Skills Social/professional role and identity Beliefs about capabilities Beliefs about consequences Motivation and goals Memory, attention and decision processes</p>	<p>Audio recording analysis - A priori codes were created using 12 theoretical domains. Credibility and dependability ensured through facilitated openness, detailed diary of events by researcher and voice recordings. Authenticity ensured</p>	<p>Successful program implementation requires involvement at each phase of the program progression</p>	<p>Small sample size Degree of involvement not quantified or qualified</p>

					Environmental context and resources Social influences Emotion Behavioral regulation Nature of the behaviors	through direct quotations Confirmation through presentation of data to midwives		*** III, good
Joshi, M. & Bernard, D. (1999). Clinical performance improvement series. Classic CQI integrated with comprehensive disease management as a model for performance improvement.	Continuous Performance /Quality Improvement	Quasi-experimental Patient satisfaction survey, Health risk assessments, medical record review and managed care risk data	28 programs, 14000 patients	The four steps of designing, developing, deploying, and evaluating and improving the disease management approach to best practice	Outcomes data tracking Practice profiles – physician performance Balanced scorecards	Provider feedback twice per year Outcomes data provided to staff and providers	Design Best Practices, Influence/Clinician Decision Making, Deploy and Deliver Best Practices, and Improved Outcomes	Large study across multiple settings Applied to variety of disease management programs

<p>based practice: effectiveness of a structured multifaceted mentorship programme</p>				<p>implementation 4) job satisfaction 5) group cohesion 6) intent to leave nursing/current role</p>	<p>Job Satisfaction Intention to leave scale</p>	<p>missed responses</p>		<p>*** II, high</p>
<p>Tolson, D., McAloon, M., Hotchkiss R. & Schofield I. (2005). ^[1]Progressing evidenced-based practice: an effective nursing model?</p>	<p>Knowledge synthesis /Newman's knowledge management</p>	<p>Qualitative Volunteer Interviews</p>	<p>15 nurses, semi-structured telephone interview</p>	<p>Open and Closed questions regarding virtual college, level of interest, influence on personal approach</p>	<p>Research assistant and experienced practitioner</p>	<p>Cognitive mapping</p>	<p>Five components for successful preparation, pilot and support increase value</p>	<p>Small sample Limited access or perceived lack of e-learning support influence responses *** III, good</p>
<p>Brose, L., McEwen, A., Michie, S., West, R.,</p>	<p>Previous surveys of clinician manual use</p>	<p>Online/Email Survey</p>	<p>2420 surveys accessed 840 practitioners</p>	<p>Access to manuals Usefulness of manuals</p>	<p>Demographics and professional characteristics</p>	<p>Mean access rates t-test and ANOVAs</p>	<p>Access to training materials and training on use</p>	<p>Weak evidence to support usefulness and perceptions</p>

<p>Chew, X., & Lorencatto, F. (2014). Treatment manuals, training and successful provision of stop smoking behavioural support.</p>	<p>conducted in the context of psychotherapy interventions</p>		<p>713 training responses</p>	<p>Outcomes impact by support</p>	<p>Filter current practice seeing smokers Training status based on NCSCT</p>	<p>small groups collapsed Reliant on self-reports</p>	<p>increased success outcome rates</p>	<p>Duplicate access/response was not prevented Practitioner representation not assessed</p> <p>*** II, good</p>
---	--	--	-------------------------------	-----------------------------------	--	---	--	---

Abbreviations Key:

NCSCT – National Center for Smoking Cessation Training

Appendix B: Evidence Synthesis Table

Studies	Study Design	Sample size Quantity of research studies	Implementation process diagram
A	Quasi-Experimental	N=9 One study	Yes 12 domains
B	Quasi-Experimental	N=28 programs/14000 patients Multiple studies	Yes PDSA cycle individualized
C	Qualitative	N=9 racers/10 clinical staff One study, based on previous studies	No
D	Quasi-Experimental	N=159 pre-and N=99 post intervention	Yes ARCC Model

		One study	
E	Qualitative	N=15 One study	Yes, Limited Journey to best practice
F	Quasi-Experimental	N=840 practitioners/713 questions for training One study	No

Appendix C: Identify and DRIVE Overview

Each element within each phase is analyzed according to the following grid:

Current State – Describe current practice.	Desired State – Describe the desired practice	Define the gap – Worker Workplace Workflow	What’s needed? – What approach adequately impacts the cause of the gap?	Accountability – Who is responsible?	Identify Barriers
--	---	--	---	--------------------------------------	-------------------

	Prepare 0-30 days	Learn 30-60 days	Transfer 60-90 days	Achieve 90-120 days and beyond
I -Identify Phase (Identify and Set up the Program)				
Target audience/population	X			
Current State	X			
Desired State	X			
Attributable Gap (Worker, workplace, and/or work flow)	X			
D – Design Phase (Design and Develop the Program)				
Start and end dates	X			
Instructional Approach	X			
Manager, provider, staff engaged	X			
Roles of team members defined	X			
Oversight plan	X			
Inclusion and Exclusion Criteria	X			
Threshold for completion	X			
R – Reach Phase (Reach impacted audience and revise as needed)				
Identify the Why? WIIFM?		X		
Deliver content		X		
Practice opportunity		X		
Collect feedback		X		
Supplies present		X		

Resources to support performance		X		
Resources to support culture		X		
I – Implement (Implement systems and processes to support transfer to practice)				
Communication Strategy			X	
Threshold for completion is reached and teams are ready			X	
Assess Process Measures			X	
Assess Negative Outcomes			X	
V – Value				
Plan Celebrations			X	
Peer to Peer Learning and Sharing			X	
Core of experts supporting change			X	
Frequency of successful change in place			X	
E - Evaluate				
Results measure success				X
Analyze and compare actual results to expected results				X
Costs of implementation				X
Assess remaining fears				X
Additional factors that obscure or invalidate program				X
Outcomes				X

When there is a gap or need identified, according to the analysis above, the following tools or templates may be individualized.

Phase	Tools
Identify	Gap Assessment – Desired Behavior, Identify Equipment Work flow Diagram – Current and Future states Work stream Identification FAQ
Design	Start/End Time definitions Roles and Responsibilities Communication Plan – audience and peer group identification Program Details and Content Audience ROI

	FAQ
Reach and Revise	<ul style="list-style-type: none"> Calendar Gantt Revision of previous tools Learning methods for desired behavior (e-learning, hands on, or combinations) Deliver content (include the Why?) Practice Opportunity Feedback and Fears Identify resources to support performance expectations Supplies present Culture support Communication Strategy and Template FAQ
Implement	<ul style="list-style-type: none"> Roles and Responsibilities Oversight Method Completion of training/education Policy FAQ
Value	<ul style="list-style-type: none"> Celebrations Education Plan Core of Experts Peer to peer sharing, learning, coaching Ongoing education Talking Points Management of change requests FAQ
Evaluate	<ul style="list-style-type: none"> Competency (Knowledge, Skills and Attitudes) Reporting Process Metrics Outcome Metrics Evaluation Plan or scorecard FAQ

Appendix D: Identify FAQ (Adapted from Kaiser Permanente, Clinical Effectiveness)

- Why is the intervention being implemented in your setting?
- Who decided to implement the intervention?
- What kind of information or evidence are you aware of that shows whether the intervention will work in your setting?
- How does this knowledge affect your perception of the intervention?
- What kind of support or actions can you expect from leaders in your organization to help make implementation successful?
- Who are these leaders? How do attitudes of different leaders vary?
- Do they know about the intention to implement the intervention?
- What kind of support can you expect going forward? Can you provide specific examples?
- What types of barriers might they create?

Appendix E: Design FAQ (Adapted from Kaiser Permanente, Clinical Effectiveness)

- How will the intervention fill current gaps?
- What do administrative or other leaders think of the intervention?
- What kind of supporting evidence or proof is needed about the effectiveness of the intervention to get staff on board? Co-workers? Administrative leaders?
- What kinds of changes or alterations do you think you will need to make to the intervention so it will work effectively in your setting?
- Do you think you will be able to make these changes? Why or why not?
- How complicated is the intervention?
- Who will lead implementation of the intervention?
- How did/will this person come into this role? Appointed? Volunteered?
- What attributes or qualities does this person have that makes them an effective leader of this implementation? What attributes or qualities does this person lack?
- Does this person have sufficient authority to do what is necessary to implement the intervention?
- Who else is involved with leading the implementation?
- Other than the formal implementation leader, are there people in your organization who are likely to champion (go above and beyond what might be expected) the intervention?
- Were they formally appointed in this position, or was it an informal role?
- What position do these champions have in your organization?
- How do you think they will help with implementation? Getting people to use the intervention?
- What kinds of behaviors or actions do you think this individual/champion will exhibit? For example, helping get senior leaders on board, helping solve problems? Or a small role?
- What kinds of infrastructure changes will be needed to accommodate the intervention? Changes in scope of practice? Changes in formal policies? Changes in information systems or electronic records systems? Other?
- What kind of approvals will be needed? Who will need to be involved?
- Can you describe the process that will be needed to make these changes?
- How will the infrastructure of your organization (social architecture, age, maturity, size, or physical layout) affect the implementation of the intervention?
- How will the infrastructure facilitate/hinder implementations of the intervention?
- How will you work around structural challenges?
- Do you expect to have sufficient resources to implement and administer the intervention?
 - [If Yes] What resources are you counting on? Are there any other resources that you received, or would have liked to receive? What resources will be easy to procure?
 - [If no] What resources will not be available?
- Can you describe the plan for implementing the intervention?
- How detailed is the plan? Who knows about it? Is the plan overly complex?

- Understandable? Realistic and feasible?
- What is your role in the planning process?
 - Who is involved in the planning process? What are their roles?
 - Are the appropriate people involved in the planning process? How engaged are they?
 - Do you plan to track the progress of implementation based on your plan?
 - What if you have to modify or revise your plan due to barrier, errors, or mistakes?
 - What role has your plan for implementation played during implementation?
 - Was it used to guide implementation of the intervention?
 - Was it used to compare planned with actual progress?
 - Were there revisions or refinements to the plan?
 - Was the plan shared/reviewed with other stakeholders? How regularly?
 - What is your communication or education strategy (not including training, see Access to Knowledge and Information) for getting the word out about the intervention?
 - What materials/modes/venues do you plan to use? For example, e-bulletin boards, emails, brochures?
 - What process do you plan to use to communicate? For example, going to staff meetings, talking to people informally?
 - Who are the key individuals to get on board with the intervention?
 - To encourage individuals to use the intervention? To help with implementation?

Appendix F: Reach and Revise FAQ (Adapted from Kaiser Permanente, Clinical Effectiveness)

- Who are the key influential individuals to get on board with this implementation?
- What kind of training is planned for you? For colleagues?
- Do you feel the training will prepare you to carry out the roles and responsibilities expected of you? Can you explain?
- What are the positive aspects of planned training?
- What is your perception of the quality of the supporting materials, packaging, and bundling of the intervention for implementation? Why?
- What supports, such as online resources, marketing materials, or a toolkit, are available to help you implement and use the intervention?
- How do you access these materials?
- How will available materials affect implementation in your setting?
- What costs will be incurred to implement the intervention?
- Have you elicited information from participants regarding their experiences with the intervention?
- What are their perceptions of the intervention?
- Can you describe what kind of specific information you have heard?
- How well do you think the intervention will meet the needs of the individuals served by your organization?
- In what ways will the intervention meet their needs?
- How do you think the individuals served by your organization will respond to the intervention?
- What barriers will the individuals served by your organization face to participating in the intervention?

Appendix G: Implement FAQ (Adapted from Kaiser Permanente, Clinical Effectiveness)

- To what extent would implementing the intervention provide an advantage for your organization compared to other organizations in your area?
- Is there a competitive advantage?
- Is there something about the intervention that would bring more individuals into your organization, instead of another one in your area?
- Are meetings, such as staff meetings, held regularly? Do you typically attend? Who typically attends? What proportion of staff typically attend?
- How often are the meetings held?
- What is a typical agenda? How helpful are these meetings?
- How do you typically find out about new information, such as new initiatives, accomplishments, issues, new staff, staff departures?
- When you need to get something done or to solve a problem, who are your "go-to" people?
- Can you describe a recent example?
- What kinds of information and materials about the intervention have already been made available to you? Copies of materials? Personal contact? Internal information sharing; e.g., staff meetings? Has it been timely? Relevant? Sufficient?
- Who do you ask if you have questions about the intervention or its implementation?

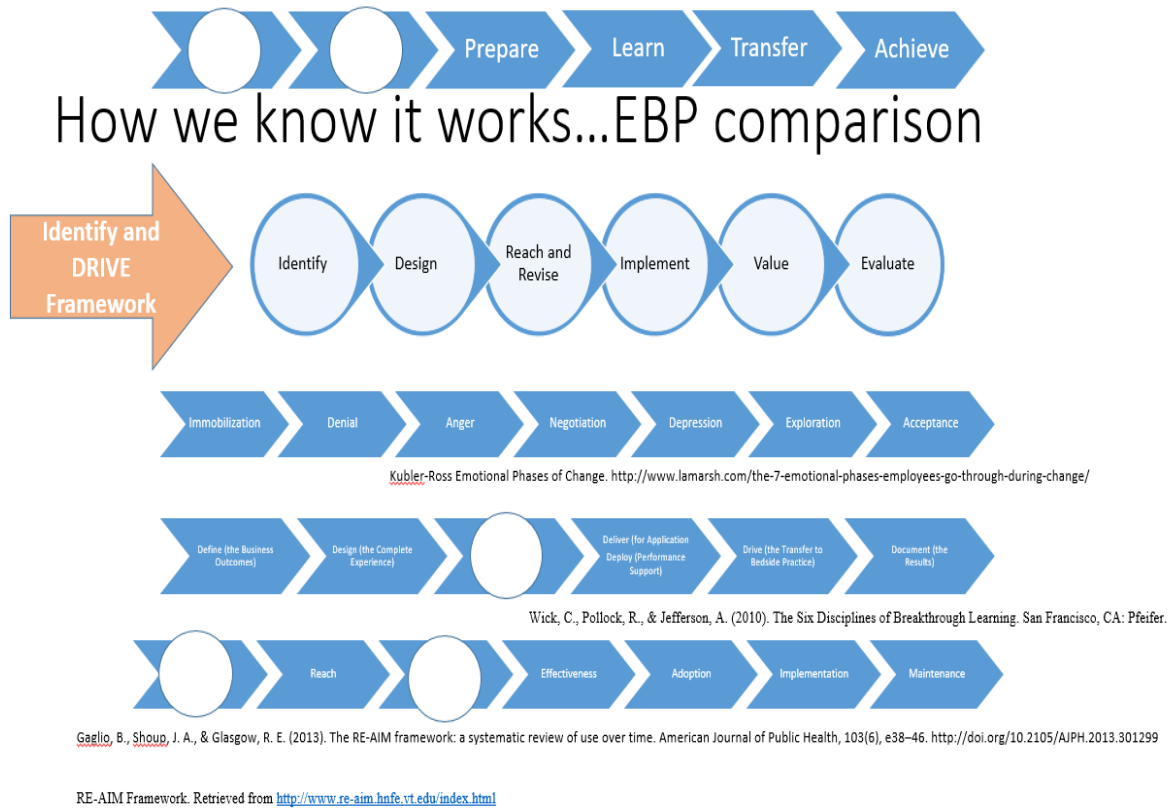
Appendix H: Value FAQ (Adapted from Kaiser Permanente, Clinical Effectiveness)

- To what extent are other units within your organization implementing the intervention?
- How does that affect support for implementing the intervention in your own setting?
- To what extent are new ideas embraced and used to make improvements in your organization? Can you describe a recent example?
- What is the general level of receptivity in your organization to implementing the intervention? Why?
- How do people feel about current programs/practices/process that are available related to the intervention?
- To what extent do current programs fail to meet existing needs? Will the intervention meet these needs?
- Are there any special recognitions or rewards planned that are related to implementing the intervention? Can you describe them?
- Will these be targeted to groups/teams/units or individuals?
- How will you or your colleagues communicate to the individuals that are served by your organization about the intervention?
- How will they participate in the intervention?
- How will they access the intervention?

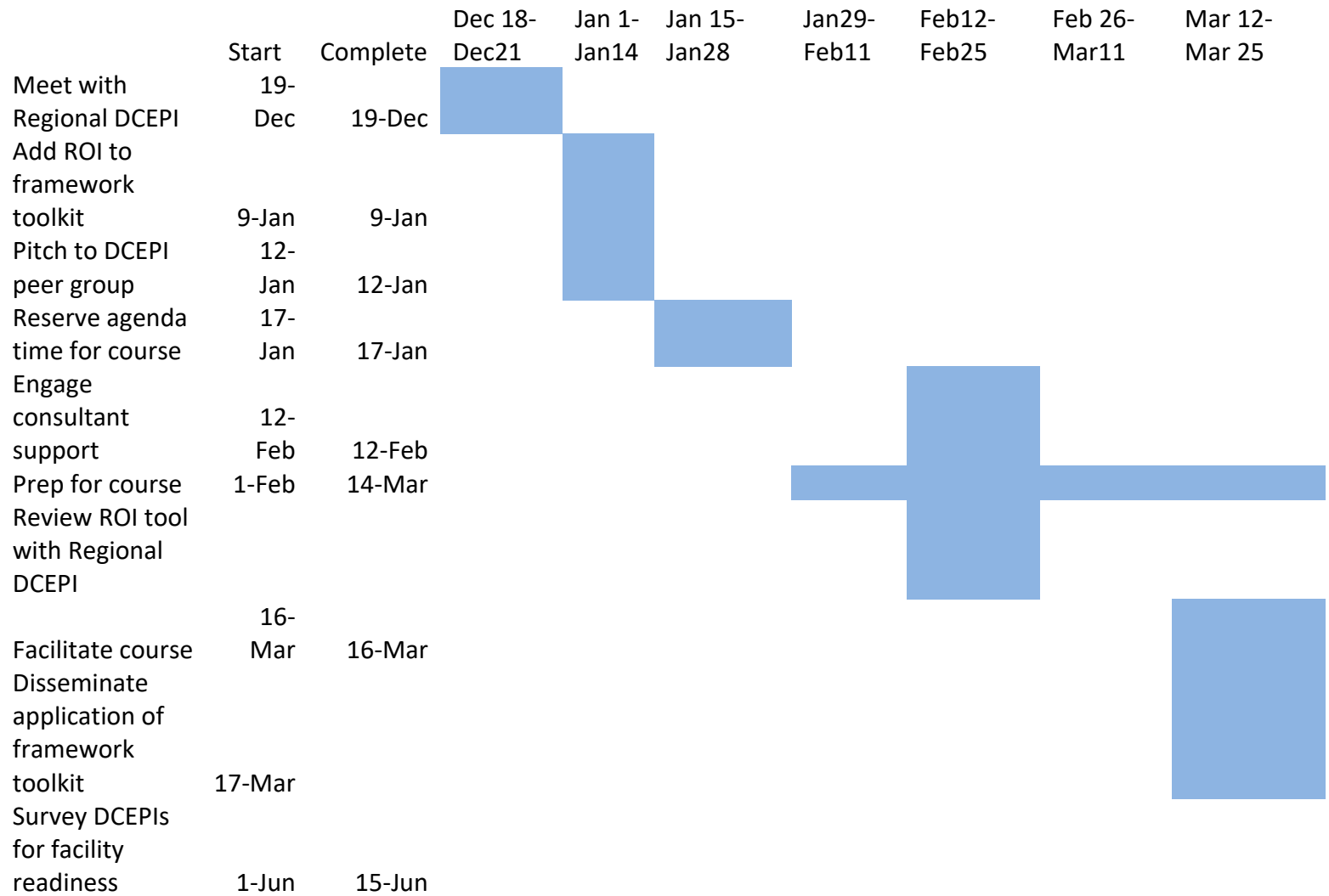
Appendix I: Evaluate FAQ (Adapted from Kaiser Permanente, Clinical Effectiveness)

- Can you describe how the intervention will be integrated into current processes?
- How will it interact or conflict with current programs or processes?
- To what extent might the implementation take a backseat to other high-priority initiatives going on now?
- How important do you think it is to implement the intervention compared to the other priorities?
- How important is it to others, such as your coworkers or leaders, to implement the intervention compared to the other priorities?
- How does implementation of the intervention align with other organizational goals?
- What level of involvement has leadership at your organization had so far with the intervention?
- Do they know about the intention to implement the intervention?
- Who are these leaders? How do attitudes of different leaders vary?
- What kind of support have they given you? Can you provide specific examples?
- What is missing?
- What kind of continued training is planned?
- How available are these individuals?
- What steps have been taken to encourage individuals to commit to using the intervention?
- Which individuals will you target?
- How will you approach them?
- What information will you give them?
- How frequently and how will you communicate with them?
- Has the intervention been implemented according to the implementation plan?
 - [If Yes] Can you describe this?
 - [If No] Why not?
- What kind of information do you plan to collect as you implement the intervention?
- Which measures will you track? How will you track them?
- How will this information be used?
- How will you assess progress towards implementation or intervention goals?
- How will results of the evaluation be distributed to stakeholders?
- To what extent has your organization/unit set goals for implementing the intervention?
- How will goals be communicated in the organization? To whom will they be communicated?
- What are the goals? How and to whom will they be communicated?

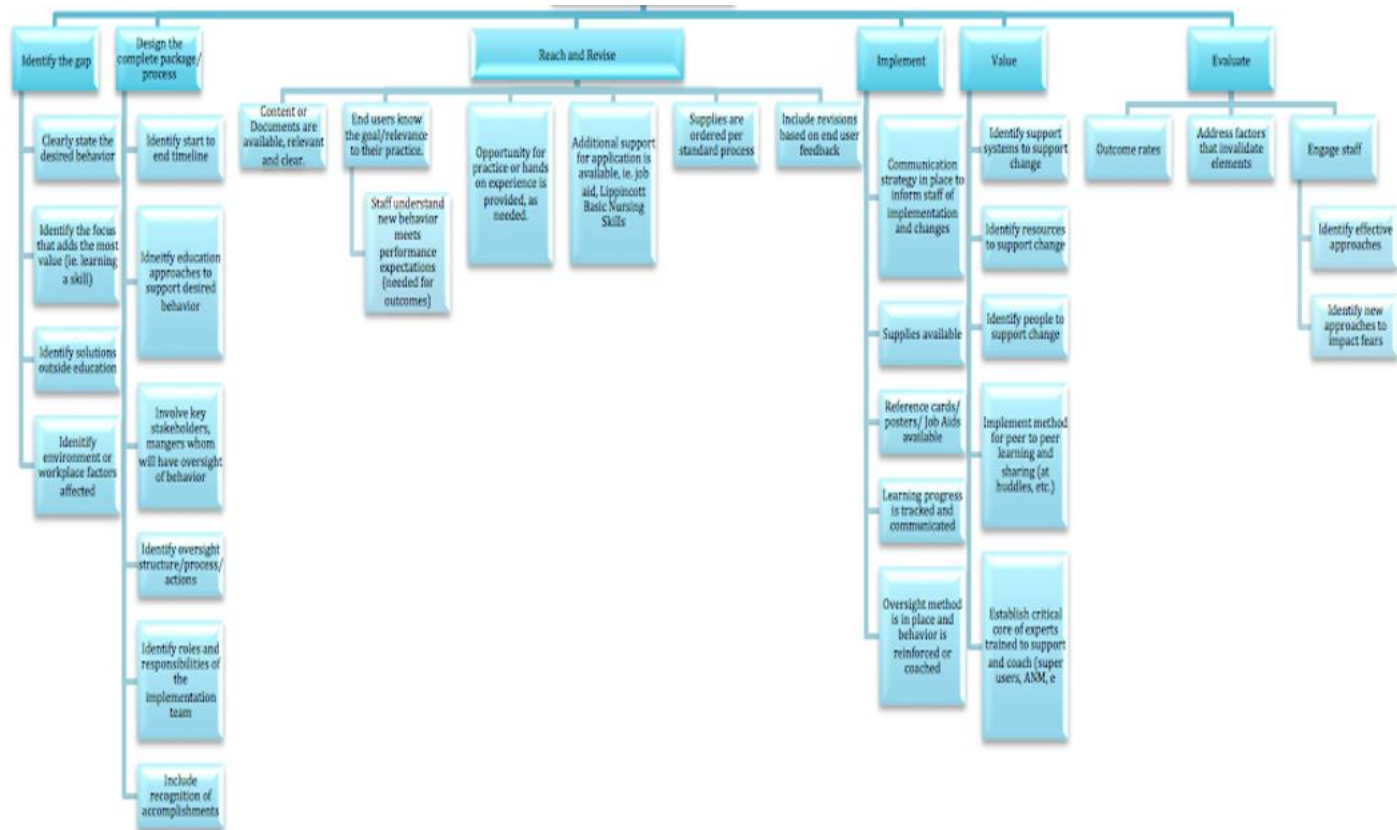
Appendix J: Gap Analysis



Appendix K: Project Implementation Gantt



Appendix L: Work Breakdown Structure



Appendix M: SWOT Analysis

<p style="text-align: center;">Strengths</p> <ul style="list-style-type: none"> • Director or Manager of Clinical Education, Practice and Informatics in each facility • Responsible and Applicable across all service lines • Multidisciplinary Planning and Implementation 	<p style="text-align: center;">Weaknesses</p> <ul style="list-style-type: none"> • Resources vary across medical centers (Presence or number of educators, CNS, etc.) • Weak or varying knowledge of responsibility links between operations and Education
<p style="text-align: center;">Opportunities</p> <ul style="list-style-type: none"> • Literature Review/Evidenced based professional practices • Focused intervention/approaches addressing the identified gap 	<p style="text-align: center;">Threats</p> <ul style="list-style-type: none"> • Dependence on Supporting Departments may impact timelines, go-lives, etc. (EMR build, Supplies, etc.)

Appendix N: Responsibility/Communication Matrix (Adapted from Kaiser Permanente, Clinical Effectiveness)

Role	Group	RACI	Brief Description	Initiative Performance Data - Facility	Initiative Performance Data - Regional
Local Oversight	CNEs	A	Accountable for facility patient care performance	Weekly	Monthly
Local Oversight	APIC for Hospital Operations	A	Accountable for facility patient care performance	Weekly	Monthly
Local Management	Service Line Director (s)	A/R	Service Line Director(s) responsible for local department level interventions and bedside patient care performance	Daily - Weekly	Monthly
Local Oversight	Infection Control Committee	A	Accountable for local infection rates.	Weekly	Monthly
Local Expert	Infection Control Practitioner	C/I	Hospital leadership to consult with IP on data. IP informed and act as technical experts.	Weekly	Monthly
Local Management	Infectious Disease MDs	R	ID responsible for local physician interventions	Weekly	Monthly

Local Management	HBS Chief and MDs	R	HBS Chief and MDs responsible for local physician	Weekly	Monthly
Regional Oversight	Clinical Leader	C	Nursing Clinical Lead to support Service Line Directors and CNE in education/ use of data for nursing performance	X	Monthly
Regional Oversight	Physician Lead	C	Physician Clinical Lead to partner with Nursing Clinical Leader in education/ use of data for Physician performance	X	Monthly
Regional Mentor	RICC	A	Provide oversight to regional trends. Identify if/when intervention needed based on local escalation and/or regional analysis	X	Monthly
Regional Consultation	HEROES	C	Address issues escalated by RICC. Contact facility and provide consultative recommendations & perform site visits (as requested by RICC).	X	Monthly

Legend:

Responsible (R) - Responsible for completing the data or deliverable

Accountable (A) - Accountable for assuring deliverable meets completion criteria (responsible for setting control requirements including completion criteria and monitoring compliance)

Contributor/Consulted (C) - Consulted or Contributes to completion of the data or deliverable

Informed (I) - Informed with contents of the completed data deliverable

Appendix O: Identify and DRIVE Framework Budget Template

Discipline	Activity	Hours Projected*	Cost
Fixed Expenses			
Nurse educator	Research evidenced based practice	4	\$360
Nurse educator	Deliver education to staff	24	\$ 2160
Physician lead	Research evidenced based practice	4	\$ 600
Physician Lead	Identify and DRIVE planning/implementation - weekly for 12 weeks	1	\$1800
Physician Lead	Deliver education to physician providers	8	\$1200
Nurse Lead	Identify and DRIVE planning/implementation - weekly for 12 weeks	1	\$1080
Data Analyst	Monitoring / Evaluation of program	2	\$200
Project Management	Identify and DRIVE planning/implementation - weekly for 12 weeks	1	\$600
Physician Lead	Ongoing support during the 8 weeks after launch	1	\$1200
Nurse Lead	Ongoing support during the 8 weeks after launch	1	\$720
Nurse (staff)	Ongoing support during the 8 weeks after launch	1	\$600
			\$10520
Variable Expenses based on scope of project			
Physician (providers)	Education completion (Assume 25 physicians)	1	\$3750
Nurse (staff)	Education completion (Assume 50 nurses)	2	\$9000
Nurse manager/lead	Oversight, reinforce performance at bedside (Assume one patient care unit only)	2 (weekly) = 104	\$10400
			\$23150
			\$33670

*Projected hours are variable depending on application of Identify and DRIVE, facility need/current state compared to desired state and evidenced based practice change requirements.

Appendix P: Cost Benefit Analysis Template

Identify and DRIVE Framework Budget (Appendix O)			\$33670
Recurring Labor/Payroll Expenses			
Nurse (staff)	Annual Education (per nurse) Assume 50 nurses (Appendix O)	0.5	\$1875

Non-payroll	Cost
Patient Care Supplies and Materials	(per day)
Electronic Medical Record enhancements	*

*Enhancements and changes to the electronic medical record are not transferred to/ billed to patient care operations. The department maintains its own budget for payroll and non-payroll expenses.

Potentially Avoidable Costs	Cost
<ul style="list-style-type: none"> • Consider impact to length of stay • Consider impact to staff (demand, injury, etc.) • Consider average costs per day 	

Cost Benefit Analysis Formula

Labor Costs (-)
Non- labor costs (-)
Potentially Avoidable Costs (+)
(=)Cost Benefit

Appendix Q: Cost Avoidance/Benefit Analysis
 (Reducing hospital acquired infections- Example)

Labor Costs (-)	\$33670
Non- labor costs (-)	*
Avoidable Costs per Infection (+)	
<ul style="list-style-type: none"> • Lawyer fee per instance • Potentially Avoidable Costs per day (Rappleye, 2015) 	<p>\$38,000</p> <p>\$3500</p>
(=) Analysis	\$11,330

*This practice change does not require supplies and materials. Budgets for patient care practice changes must include any costs for supplies or materials.

	Baseline Total - 32 infections	Reduction by 2 cases	Reduction by 5 cases
Hospital Acquired Infection Costs * (Avoidable Cost=\$45000 each infection)	\$1,497,600	<\$90000> \$1,407,600	<\$225,000> \$1,272,600

*Baseline Assumption: Hospital Acquired Infection Cost = {\$38000 + (\$3500 *2 days average increased length of stay)}*32 infections in 2016, in one hospital

ROI for	2.67:1
ROI for	6.68:1

Appendix R: Formative Evaluation - 12 item User Perception Survey

Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3958345/table/pone-0091013-t006/>

Question	Possible Answers
I have the ability to successfully implement an evidence based practice change.	Strongly Disagree Disagree No Opinion Agree Strongly Agree
I am confident that I could that I can plan and successfully implement a change in practice at my facility	Strongly Disagree Disagree No Opinion Agree Strongly Agree
For me, successful planning and implementation of an evidenced based practice change is	Very Difficult Difficult No Opinion Easy Very Easy
To the best of my knowledge, the proportion of colleagues who will understand their role in implementing a change in practice would be:	0% 25% 50% 75% 100%
Now think about a co-worker who you respect as a professional. In your opinion, does he/she understand their role in implementing a change in practice?	Never Almost Never No Opinion Agree Strongly Agree
Most persons who are important for me in the profession would understand their role in implementing a change in practice.	Strongly Disagree Disagree No Opinion Agree Strongly Agree
Overall, I think that successful implementation of evidence based practice changes are	Useless Somewhat Useless No Opinion Somewhat Beneficial Beneficial
Overall, I think that planning and implementing an evidence based practice change successfully, to me is	Useless Somewhat Useless No Opinion Somewhat Beneficial

	Beneficial
Successful implementation of evidence based practice change is the ethical thing to do.	Strongly Disagree Disagree No Opinion Agree Strongly Agree
It would be acceptable to plan and implement evidence based practice changes.	Strongly Disagree Disagree No Opinion Agree Strongly Agree
I intend to successfully plan and implement evidence based practice changes in my facility.	Strongly Disagree Disagree No Opinion Agree Strongly Agree
I plan to implement evidenced based practice change in my facility.	Strongly Disagree Disagree No Opinion Agree Strongly Agree

Appendix S: Summative Evaluation- CISIES post-implementation Survey

Retrieved from

<https://static1.squarespace.com/static/544fade5e4b0f931fe6405bd/t/54bdd27be4b0bf25db95d9e3/1421726331373/CISIES+Post.pdf>

CISIES-Post

Clinical Information System Implementation Evaluation Scale, post-launch version

Survey Instructions

1. Select the answer that corresponds to your level of disagreement (left) or agreement (right) with each item: Strongly Disagree, Disagree, Somewhat Disagree, Somewhat Agree, Agree, or Strongly Agree.
2. Read each item carefully. **Keep an eye out for "negatively" worded statements.** For example, if you love broccoli, in response to the statement "Broccoli is one of my least favorite foods," you would answer Strongly Disagree or Disagree. Note that **disagreement is first (leftmost)** on the scale!
3. Please make sure you have answered **all statements**, as your input is very valuable to us.

		STRONGLY DISAGREE	DISAGREE	SOMEWHAT DISAGREE	SOMEWHAT AGREE	AGREE	STRONGLY AGREE	NOT APPLICABLE
DEPENDABILITY	1. I am able to depend on the accuracy of the new system.	O ₁	O ₂	O ₃	O ₄	O ₅	O ₆	O ₉
	2. The use of the new system reduces errors.	O ₁	O ₂	O ₃	O ₄	O ₅	O ₆	O ₉
	3. With the new system, patient information is more confidential and secure.	O ₁	O ₂	O ₃	O ₄	O ₅	O ₆	O ₉
	4. Using the new system leads to better adherence to policies and procedures.	O ₁	O ₂	O ₃	O ₄	O ₅	O ₆	O ₉
	5. Problems with the new system interfere with patient care.	O ₁	O ₂	O ₃	O ₄	O ₅	O ₆	O ₉
	6. Information almost never gets lost in the new system.	O ₁	O ₂	O ₃	O ₄	O ₅	O ₆	O ₉
TRAINING	7. The training I have received is adequate.	O ₁	O ₂	O ₃	O ₄	O ₅	O ₆	O ₉
	8. I feel confident I am able to assist others in using the new system.	O ₁	O ₂	O ₃	O ₄	O ₅	O ₆	O ₉
	9. Adequate resources are available when I am learning to use the new system.	O ₁	O ₂	O ₃	O ₄	O ₅	O ₆	O ₉
WORKLOAD	10. Using the new system is more efficient than the old way of doing things.	O ₁	O ₂	O ₃	O ₄	O ₅	O ₆	O ₉
	11. Using the new system allows me to spend more time on other aspects of patient care.	O ₁	O ₂	O ₃	O ₄	O ₅	O ₆	O ₉
	12. Using the new system has added to my workload.	O ₁	O ₂	O ₃	O ₄	O ₅	O ₆	O ₉
	13. Using the new system has added to my stress level.	O ₁	O ₂	O ₃	O ₄	O ₅	O ₆	O ₉
	14. Using the new system takes a lot more time than the old way of doing things.	O ₁	O ₂	O ₃	O ₄	O ₅	O ₆	O ₉

		STRONGLY DISAGREE	DISAGREE	SOMEWHAT DISAGREE	SOMEWHAT AGREE	AGREE	STRONGLY AGREE	NOT APPLICABLE
PATIENT CARE	15. I believe the use of the new system improves the quality of patient care.	O ₁	O ₂	O ₃	O ₄	O ₅	O ₆	O ₉
	16. Using the new system has improved my practice.	O ₁	O ₂	O ₃	O ₄	O ₅	O ₆	O ₉
	17. Information from the new system enables me to make better decisions about patient care.	O ₁	O ₂	O ₃	O ₄	O ₅	O ₆	O ₉
	18. I believe the use of the new system improves patient outcomes.	O ₁	O ₂	O ₃	O ₄	O ₅	O ₆	O ₉
DESIGN & TROUBLESHOOTING	19. I get as much help as I need to fix any problems with the new system.	O ₁	O ₂	O ₃	O ₄	O ₅	O ₆	O ₉
	20. The implementation of the new system takes into account the specific needs of my care area(s).	O ₁	O ₂	O ₃	O ₄	O ₅	O ₆	O ₉
	21. I am satisfied with the process for making suggestions for improvements in the new system.	O ₁	O ₂	O ₃	O ₄	O ₅	O ₆	O ₉
	22. I am satisfied with the process for identifying and reporting issues that need to be fixed in the new system.	O ₁	O ₂	O ₃	O ₄	O ₅	O ₆	O ₉
	23. There is adequate feedback to anyone who reports a problem with the new system.	O ₁	O ₂	O ₃	O ₄	O ₅	O ₆	O ₉
	24. People who use the new system have had a say in the design of the system.	O ₁	O ₂	O ₃	O ₄	O ₅	O ₆	O ₉
TEAMWORK	25. People I work with on a daily basis support me in my use of the new system.	O ₁	O ₂	O ₃	O ₄	O ₅	O ₆	O ₉
	26. It takes me too much time to help others who don't know how to use the new system.	O ₁	O ₂	O ₃	O ₄	O ₅	O ₆	O ₉
	27. Using the new system facilitates communication of patient information among the members of my profession who work with me.	O ₁	O ₂	O ₃	O ₄	O ₅	O ₆	O ₉
	28. Using the new system facilitates communication among members of our health care team.	O ₁	O ₂	O ₃	O ₄	O ₅	O ₆	O ₉
	29. Using the new system makes me feel like I am no longer working as part of a team.	O ₁	O ₂	O ₃	O ₄	O ₅	O ₆	O ₉
	30. I believe my colleagues sometimes resent the time it takes me to get things done using the new system.	O ₁	O ₂	O ₃	O ₄	O ₅	O ₆	O ₉
	31. Members of other disciplines have been adequately trained regarding how their entry of information affects my use of the new system.	O ₁	O ₂	O ₃	O ₄	O ₅	O ₆	O ₉
OVERALL	32. Overall, I prefer using the new system rather than the old way of doing things.	O ₁	O ₂	O ₃	O ₄	O ₅	O ₆	O ₉
	33. Overall, the introduction of the new system has been effective.	O ₁	O ₂	O ₃	O ₄	O ₅	O ₆	O ₉
	34. I'm committed to the successful use of the new system.	O ₁	O ₂	O ₃	O ₄	O ₅	O ₆	O ₉

Appendix T: Formative Results-12 item User Perception Survey

Measure	Pre-intervention	Post-intervention
Engagement	84%	91%
Ability to plan EBP changes	64%	100%
Ability to implement EBP changes	40%	100%
Understand role in implementation	54%	100%
Recognizing benefits of planning	90%	100%
EBP acceptable, ethical, and within intent	100%	100%

Appendix U: CISIES Summative Evaluation

Survey question group	Survey result
Dependability	89%
Training	78%
Workload	89%
Patient Care	89%
Design and Troubleshooting	67%
Teamwork	89%
Overall	89%

DNP Statement of Non-Research Determination Form

Student Name: Michele Paulo _____

Title of Project: The Key to Successful Implementation-Putting Education into Practice

Brief Description of Project: This project uses Performance Improvement approaches to develop a product that will be used for successful implementation of evidenced based practice or to hardwire a practice change. The deliverable is a plan or toolkit containing process templates, guides, and/or tools. The implementation plan is based on and addresses the four stages of learning, in a manner that can be reliably replicated across multiple facility sites and/or a number of practices.

A) Aim Statement: By April 2017, a NCAL implementation playbook template will be implemented for use and comparison of implementation success and experience.

B) Description of Intervention: The intervention is based on elements for success used in the four phases of learning (prepare, learn, transfer, and achieve) and the RE-AIM framework (Reach, Effectiveness, Adoption, Implementation, Maintenance) for successful implementation of evidenced based practice. A toolkit of templates will be used to individualize the content and approaches needed, to address the identified change in practice. Identification of a change need begins with an assessment of the current state and the desired state. The gap identified, between the two states, becomes the focus of the tools and template contents and approaches. The toolkit is applicable to any new setting, where there is identified gap and need for change in practice or performance.

C) How will this intervention change practice? Use of evidenced based frameworks, to develop an organizational specific tool, to plan and implement practice changes successfully, eliminating re-implementation or additional costs related to failed or delayed implementations.

D) Outcome measurements: Facility leader, CNE and Director level, experience will be surveyed to compare an implementation using the toolkit compared to prior implementation experiences. Successful implementation of the evidenced based practice change will be measured by the outcome metric of the practice. In combination, experience and

outcome measure will demonstrate the success of the toolkit.

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

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

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

Comments:

EVIDENCE-BASED CHANGE OF PRACTICE PROJECT CHECKLIST *

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

Project Title:	YES	NO
The aim of the project is to improve the process or delivery of care with established/accepted standards, or to implement evidence-based change. There is no intention of using the data for research purposes.	X	
The specific aim is to improve performance on a specific service or program and is a part of usual care . ALL participants will receive standard of care.	X	
The project is NOT designed to follow a research design, e.g., hypothesis testing or group comparison, randomization, control groups, prospective comparison groups, cross-sectional, case control). The project does NOT follow a protocol that overrides clinical decision-making.	X	
The project involves implementation of established and tested quality standards and/or systematic monitoring, assessment or evaluation of the organization to ensure that existing quality standards are being met. The project does NOT develop paradigms or untested methods or new untested standards.	X	
The project involves implementation of care practices and interventions that are consensus-based or evidence-based. The project does NOT seek to test an intervention that is beyond current science and experience.	X	
The project is conducted by staff where the project will take place and involves staff who are working at an agency that has an agreement with USF SONHP.	X	
The project has NO funding from federal agencies or research-focused organizations and is not receiving funding for implementation research.	X	

The agency or clinical practice unit agrees that this is a project that will be implemented to improve the process or delivery of care, i.e., not a personal research project that is dependent upon the voluntary participation of colleagues, students and/ or patients.	X	
If there is an intent to, or possibility of publishing your work, you and supervising faculty and the agency oversight committee are comfortable with the following statement in your methods section: <i>“This project was undertaken as an Evidence-based change of practice project at X hospital or agency and as such was not formally supervised by the Institutional Review Board.”</i>	X	

ANSWER KEY: If the answer to **ALL** of these items is yes, the project can be considered an Evidence-based activity that does NOT meet the definition of research. **IRB review is not required. Keep a copy of this checklist in your files.** If the answer to ANY of these questions is **NO**, you must submit for IRB approval.

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

STUDENT NAME (Please print): Michele Paulo

Signature of Student: X electronically signed X DATE 04/24/2016. amended 5/12/16

SUPERVISING FACULTY MEMBER (CHAIR) NAME (Please print):

Leanne Hunstock DNP _____

Signature of Faculty Member: X electronically signed X DATE 4/25/2016 and 5/12/16

June 29, 2016
University of San Francisco School of Nursing
2130 Fulton Street
San Francisco, CA 94117-1080

To Whom it May Concern,

I am writing to express support for Michele Paulo's proposed evidence based change of practice in partial fulfillment of her Doctor of Nursing Practice degree through the University of San Francisco's Executive Leadership DNP Program.

The project, entitled, "Keys to Successful Implementation – Driving Education to Practice", will focus on the development of a tool kit, containing reliable and replicate able process and tools for the planning and implementation of any evidenced based practice change. The tool kit will be applied at the Regional level to plan for Implementation of Delirium prevention and care and then again applied for cascade of the Delirium package to two alpha sites, prior to expanding to all 21 Northern California facilities. The project will review factors that need to be considered from a cultural and organizational perspective to both identify practice gaps, plan, implement and sustain an implementation, using Michele's fused Identify and DRIVE application of Consolidated Framework for Implementation Research and the RE-AIM frameworks.

Michele is a Regional Clinical Leader and has fused the application of the frameworks to present an organizationally unique tool kit overview and content, applicable to any implementation.

As the Regional sponsor for the delirium program and Michele's direct supervisor, I am very aware of, and support, this performance improvement project. The delirium prevention and care work is evidenced-based, and requires, a reliable implementation plan to ensure success in an efficient and effective manner.

This letter also verifies that Kaiser Permanente has an existing contract with University of San Francisco School of Nursing.
Sincerely,

Marilyn Mahugh, RN, MSN
Regional Director Patient Care Services, Kaiser Permanente
1950 Franklin Street
Oakland, CA 94612