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Quality Improvement: Developing a Hospital Program to Reduce Staff Injury Associated with the Care of the Patient with Dementia

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Doctor of Nursing Practice Program

Quality Improvement: Developing a Hospital Program to Reduce Staff Injury Associated with the Care of the Patient with Dementia

A Scholarly Project Presented to the faculty of the School of Nursing
at Boise State University

In partial fulfillment of the requirements
For the Degree of Doctor of Nursing Practice

By

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Date of Submission: April 15, 2019

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Abstract

Problem Description

Hospital clinical staff injuries can occur while caring for patients with dementia. Clinician injury is a concern because it can be career-ending for the clinician and costly to the hospital ($80,000) to replace a nurse. A reliable estimate of the numbers of staff injuries by patients does not exist in the academic literature. Occupational Safety and Health Administration (OSHA) now require hospitals to provide data on clinician injuries related to patient care. This project explored the use of dementia patient-centered care education to increase clinician self-efficacy to ultimately decrease clinician injury.

Intervention

This quality improvement project provided 20 minutes of education to clinicians on a hospital medical pilot unit during their monthly staff meeting. The dementia patient-centered care education addressed dementia pathology; the process and rationale to document behavioral events; importance of creating an individualized dementia care plan; communication techniques and interventions clinicians can use for the patient with dementia.

Results

Impact was measured three ways to demonstrate that education was adopted into practice. First method, a self-efficacy survey was administered immediately before and after the education program to measure clinician confidence in their dementia knowledge, communication with patients, recognition of patient triggers, and use of dementia interventions. Second and

third methods, care plan utilization and behavioral event documentation were retrieved from the EMR one month prior, then one, two, and three months after the education.

The pre- and post-survey showed an increase in self-efficacy in these areas: dementia knowledge, recognition of patient triggers, communication, and use of music and food interventions. Self-efficacy decreased with interventions related to backing off and creating a calm environment. On the pilot unit, six care plans were created the first month after the education but none in the month prior nor two and three months after the education. Behavioral event documentation was inconclusive due to issues identified by the clinicians: workflow issues, challenges in identifying dementia patients, defining behavioral events, and inconsistencies in the information to be included in the behavioral event documentation.

Interpretation

The delivered education was shorter than the project design and was only delivered to 46 percent of the staff on the pilot unit. Overall clinician self-efficacy improved immediately after the education. The creation of six dementia care plans the first month after the education demonstrated the transition of education into practice, though this was not sustained in subsequent months. The ability to document patient behavioral events continues to be a struggle.

Conclusion

Education to the pilot unit demonstrated an increase in clinician self-efficacy but practice changes were unable to be sustained. The recommendation

is to provide the education as designed (that is, to greater than 90 percent of staff and for 60 minutes) and to incorporate adult learning principles that allow for clinicians to practice communication techniques and identify interventions to enhance dementia care. Further analysis is needed to explore behavioral event documentation in the face of multiple barriers identified in the pilot project.

Keywords: dementia, clinician injury, workplace violence, behavioral events, workplace injury

Problem Description

Introduction

Clinical staff are being injured while caring for patients with dementia in the hospital setting. The types of injuries to clinicians include physical (e.g. from pinching, hitting) and emotional (e.g. from yelling, crying). Currently, no reliable estimate of the numbers of staff injuries by patients exists in the academic literature.

Problem Background

An estimated 5.4 million Americans have dementia, with new cases expected to double by 2050 (Alzheimer's Association, 2016). Memory loss is a key clinical symptom that gets progressively worse. In the later phase of dementia, the ability to effectively communicate becomes more difficult, resulting in aggression and behavioral problems. An estimated 40 percent of older adults with dementia are placed in long-term care facilities because the burden of care and behavioral problems are more than families can manage (Alzheimer's Association, 2016; CDC, 2016). Studies indicate that people age 65 and older survive an average of four to eight years after Alzheimer's diagnosis, and some live as long as 20 years (Alzheimer's Association, 2016). This paper will use dementia as the inclusive term to note individuals with various forms of dementia: Lewy body dementia, Alzheimer's, vascular dementia, and mild to severe cognitive impairment. The most common reasons for hospitalization for individuals with Alzheimer's disease are syncope, falls, ischemic heart disease, and gastrointestinal disease (Alzheimer's Association, 2016).

Local Problem

In 2016, Idaho reported 23,000 individuals with dementia. The number is projected to increase to 33,000 by 2025 (Alzheimer' Association, 2016). Data on workplace violence in healthcare is difficult to find, particularly data on patients injuring clinicians. In a hospital in the Northwest Region in 2017, 59 clinical staff were physically injured (e.g., pinching, hitting, broken tooth) by patients with multiple behavioral problems. An estimated 25 percent of these injuries (15) were likely caused by patients with dementia.

In 2015, two of the larger hospitals in the healthcare system attempted to address staff injury following an increase in the number of injuries associated with behavioral events. The taskforce created interventions to increase clinician safety: education to identify at-risk patients for behavioral events, an environmental safety checklist, and a process to quickly get security and social worker assistance when clinicians call a "Code Gray." The taskforce created a mandatory "situational awareness" education for clinicians in the two hospitals.

Ninety-five percent of the clinicians attended the education. Based on the positive feedback, the education became part of new employee orientation for the healthcare system, along with options for three additional behavioral-related education programs, depending on the clinician role and the hospital department. While the education is mandatory and well attended, staff injuries persist. The healthcare system, and specifically the Behavioral Health Council, has identified that current education is neither addressing the disease pathology nor individualizing interventions based on the disease pathology.

Available Knowledge

Literature Review

A literature review was conducted to find strategies and interventions to manage dementia-related behavioral situations. A search of CINAHL, JSTOR, Google Scholar, Cochrane, and the National Institute of Health Library identified more than 350,000 articles using the primary search terms of “dementia” and “behavior” plus multiple combinations of: “rating scales”, “hospital”, “assessment”, “staff injury”, “screens”, and “interventions”. The large number required narrowing the search to “English”, “research”, and “publication within the last five years”. After narrowing the search, 634 articles were identified. Non-clinical caregiver articles were excluded to further reduce the number to less than 100, including two systematic reviews, demonstrating there were more behavioral-related articles associated with *family as caregivers* than *clinicians as caregivers*.

Synthesis of the Evidence

The systematic reviews identified two interventions as beneficial for managing behavioral problems in the patient with dementia: music therapy and patient-centered care education for clinicians (Livingston et al., 2014; Martinez, Tobar, & Hill, 2015).

Music therapy provided twice a week by a music therapist reduced mild and moderate agitation behaviors (Livingston et al., 2014). While music therapy is beneficial in homes and nursing homes, it is difficult to implement in the hospital since music therapists are rare and the average hospital stay is typically less than three days.

Educating clinicians on patient-centered care and communication skills improves care for patients with dementia (Livingston et al., 2014; Martinez et al., 2015). Some of the articles cited managing behavioral problems as one of the reasons for providing education (Adams-Fryatt, Bouchurka, Carrido, Manzuik, & McDougall, 2010; Palmer, Lach, McGillick, Murphy-White, Carroll & Armstrong, 2014; Pizzacalla et al., 2015; Schindel Martin et al., 2016; Teodorczuk, Mukaetova-Ladinska, Corbett, & Welfare, 2014), but the articles did not assess the efficacy of the education for reducing behavioral events or incidents of clinician injury.

The education intervention led this Doctoral of Nursing Practice (DNP) Project Manager to search for additional dementia-related education articles for the hospital setting (see Appendix A). Patient-centered care as the core for the education was identified in several articles (Adams-Fryatt et al., 2010; Schindel Martin et al., 2016; Teodorczuk et al., 2014; Wang, Xiao & He, 2015). Multiple studies identified key education components, including a focus on pathology, communication skills, and practice changes (Elvish et al., 2014; Palmer et al., 2014; Schindel Martin et al., 2016; Teodorczuk et al., 2014). The Canadians use Gentle Persuasive Approaches in Canadian acute care settings, which is a modification of the education provided in long-term care facilities (Pizzacalla et al., 2015). Various education schedules were identified from one-day (Adams-Fryatt et al., 2010; Palmer et al., 2014), two-day (Teodorczuk et al., 2014), or spread over several days or weeks (Elvish et al., 2014; Pizzacalla et al, 2015, Schindel Martin et al., 2016; Wang et al., 2015). Three studies implemented the

education across multiple metropolitan hospitals (Palmer et al., 2104; Schindel Martin et al., 2016; Wang et al., 2015). Several of the articles identified attendance issues with methods to address the concern (Adams-Fryatt et al., 2010; Martinez et al., 2015; Palmer et al., 2014; Pizzacalla et al., 2015; Schindel Martin et al., 2016; Teodorczuk et al., 2014). None of the articles included the overall cost of the education.

Clinician self-efficacy outcomes were measured before and after the education in several studies (Elvish et al., 2014; Palmer et al., 2014; Pizzacalla et al., 2015; Schindel Martin et al., 2016; Teodorczuk et al., 2014). A limitation of all the studies was the lack of data related to behavioral events as part of the analysis (Adams-Fryatt et al., 2010; Elvish et al., 2014; Livingston et al., 2014; Palmer et al., 2014; Pizzacalla et al., 2015; Schindel Martin et al., 2016; Wang et al., 2015).

Rationale

Theoretical Model

The literature review does not support that education decreases injury, but it does support that educated clinicians feel more confident and have increased self-efficacy in providing care for patients with dementia. The scholarly project assumption is that the use of dementia patient-centered care education will increase clinician self-efficacy with patients with dementia, and ultimately result in a measurable decrease in clinician injuries.

Person-Centered Care Model

Kitwood's (1997) Person-Centered Care Model involves positive clinician interactions to address the psychological needs of attachment, inclusion, occupation, identity, comfort, and love for individuals with dementia (see Appendix B). The hospital environment has routines and timelines that create conflict between the patient with dementia and the healthcare team. The dementia Person-Centered Care Model balances the medical plan with the individual's psychological and physical needs as defined by Kitwood (1997). The paradigm shift for the clinicians is to be deliberate in connecting with the patient with dementia, overcome the communication challenges, and individualizing the care in the acute care setting.

Adult Learning Theory

Andragogy, or adult learning theory (Knowles, Holton, & Swanson, 1973/1998), is the theoretical framework to create the dementia patient-centered care education for clinicians. This approach encourages learners to incorporate and share their experiences as part of exploring the practice change.

Project Framework

The Logic Model (see Appendix C) was the framework for the scholarly project that identified the resources and outcome expectations. Kitwood's (1997) *Person-Centered Care Model* was the theoretical framework for the content of the *dementia patient-centered care education*, and adult learning theory was the framework for the education delivery (Knowles et al.,1973/1998). The education content included dementia pathology, positive communication techniques,

examples to modify the plan of care, and the importance of communicating with other clinicians.

The focus of the scholarly project was to increase clinician self-efficacy in caring for the dementia patient population, with the ultimate goal of lowering the risk of clinician injury. The education incorporated these adult learning principles: create opportunities for clinicians to share their positive and negative experiences in the hospital setting, encourage discussion for a patient-centered care environment, and identify examples to create a positive connection with the patient with dementia.

Specific Aims

The aim of this project was to educate clinicians to provide dementia patient-centered care to increase clinician self-efficacy in providing dementia care. The scholarly project was part of a larger education project of the healthcare system's Safe Care Committee, designed to decrease hospital staff injury. The scholarly project will:

- Deliver dementia patient-centered care education to staff on the pilot unit;
- Measure self-efficacy in the pilot unit staff before and after the education;
- Measure dementia knowledge in the pilot unit staff before and after the education;
- Measure nursing's knowledge acquisition of creating individualized dementia patient-centered care, by reviewing the creation of care plans; and

- Compare the number of behavioral events before and after the education to identify if there is a decrease in the number of behavioral related events—a crucial analytical step currently missing in the literature.

Context

Population

Idaho is considered one of the last frontiers of the West, with only 19 (versus a national average of 87) people per square mile. Thirty-four of Idaho's 44 counties are rural and 19 are considered frontier, having fewer than six people per square mile (Idaho Health and Welfare, Division of Public Health, Statewide Plans, 2015). In 2014, the Idaho Hospital Association membership directory reported 48-member hospitals (including one each in Ontario, Oregon, and Clarkston, Washington). Twenty-seven of these hospitals were critical access hospitals (Get Healthy Idaho, 2015). Alzheimer's disease is listed as the 6th leading mortality cause in Idaho (Infoplease, 2014).

Local Care Environment

Idaho falls short of national health services on nearly every measure. In 2014, Idaho was federally-designated as short of mental health professionals in 100 percent of the state and primary care providers in 96.4 percent of the state (Idaho Health and Welfare, Division of Public Health, Statewide Plans, 2015). With only 70 primary care physicians per 100,000 individuals, Idaho ranked 49th lowest of 50 states in 2012 (Bureau of Rural Health and Primary Care, Division of Public Health, Idaho Department of Health and Welfare). In February 2016, the Governor of Idaho initiated an executive order to increase the number of

providers and behavioral health providers (Otter, 2016). As a step to meet the executive order, Idaho's first Osteopathic School of Medicine began enrollment in August 2018.

The United States Census Bureau (2016) cites the following information for Idaho compared to the national data:

- Median household income $47,583 compared to $53,899 nationally;
- Poverty level 15.1 percent compared to 13.5 percent nationally; and
- Persons without health insurance for individuals under the age of 65 is 12.9 percent compared to the national rate of 10.5 percent.

Idaho has a state-run exchange called "Your Health Idaho" instead of the federally-managed Accountable Care Act (ACA). As of 2016, 277,500 participants per month were enrolled in the Idaho Medicaid program (Idaho Facts, Figures, and Trends, 2016; Norris, 2016).

Relevant Elements of Project Setting

The healthcare system in the Northwest Region is comprised of large metropolitan facilities and rural critical access hospitals. In the last ten years, the healthcare system has grown to become one of the largest employers in the state, with over 140 clinics and approximately 16,000 employees. The mission statement changed in 2016 from community-health to population-health focus. The healthcare system provides healthcare services to roughly 50 percent of the state — including half of the 23,000 with dementia.

Organizational Culture and Readiness for Change

In the spring of 2017, the healthcare system strategic plan included three practice-related initiatives. One of the initiatives focused on staff injuries from patients exhibiting behavioral events, with the creation of the Safe Care Committee that reports to the larger Behavioral Health Council. The committee members are subject-matter experts (SMEs) on behavioral pathologies. Committee members included social workers, a hospital-based psychiatrist, a clinical educator, an employee safety representative, nurses, Clinical Nurse Specialists, a hospital security director, a quality department representative, and an administrative assistant. Committee members represented behavioral health services from a variety of settings: clinics, long-term care facilities, inpatient mental health facility, and hospitals.

The Safe Care Committee charter outlined processes to promote staff safety, which included surveying current practices, reviewing and updating policies, creating interventions, providing education for each disease-population type, and measuring intervention impacts, all with the ultimate goal of decreasing staff injury. A healthcare system report (council minutes, April 2017) in support for the Safe Care Committee estimated the cost to replace an injured clinician ranges from $80,000 to $140,000. This includes costs for hiring, training, and covering lost work hours.

Strengths and Weaknesses

One significant strength of the scholarly project was the healthcare system support. The Safe Care Committee invited the DNP Project Manager to be on

the steering committee and agreed to work within the scholarly project timeline. The Safe Care Committee endorsed the dementia patient-centered care education, the self-efficacy tool, the dementia knowledge questionnaire, and the audit forms prior to the education being provided on the pilot unit.

Challenges for the scholarly project were difficulty in accessing specific behavioral-events data in the healthcare system, lack of financial support for clinicians to attend the education, and lack of a dementia-specific care plan. A critical limitation was the lack of behavioral-related data. Prior to 2018, reported clinician injury required a manual review the electronic medical record (EMR) progress note to glean information surrounding the clinician injury. Security maintains a paper log of Code Gray events called by staff. The log contains minimal information including: date, time, patient name, location, and a comment box. Not all behavioral or Code Gray events are called, as clinicians can decide to manage the behavioral event without the assistance of security and social work. Clinician injury information may or may not correlate with documentation in the EMR or correlate with data in the security log. This made data report retrieval of behavioral events difficult, if not nearly impossible, to capture.

The healthcare system implemented a new process in February 2018 to document behavioral and Code Gray events in the EMR. The new process enabled behavioral event data to be electronically captured as discrete data fields in the EMR, resulting in the ability to create reports. Since the EMR documentation is a new process, the DNP Project Manager anticipated inadvertent data omissions as clinicians started to incorporate the revised

practice of documenting patient behavioral events in the EMR. As clinicians become more comfortable with the patient event section of the EMR, the DNP Project Manager anticipated the number of behavioral and Code Gray events to increase as clinicians find value in the communication of minor behavioral events (e.g. yelling, pinching, pushing). Anecdotally, there continued to be more events documented in the unstructured progress notes than structured patient event EMR fields.

The financing for clinicians' time to attend the dementia education was an assessed weakness. A budget was not created to cover education for any of the activities planned by the Safe Care Committee or for the scholarly project dementia education. The costs associated with the development of the dementia education were absorbed by the Safe Care Committee members. The healthcare system expected individual units to cover the cost of education. This required the unit director to prioritize the dementia education over another department need. The pilot unit director endorsed the dementia patient-centered care education to be presented at the May 2018 staff meetings.

Another weakness was care plan utilization for the patient with dementia. Prior to March 2018, the psychosocial comfort or safety care plan did not exist as an option in the EMR. Clinicians entered dementia specific interventions as a sticky note within the EMR or manually on the whiteboard in the patient room, with neither incorporated into the patient EMR. It was expected the creation of interventions would be missing as clinicians climbed the learning curve with the new care plan option.

Memorandum of Understanding

The hospital in the Northwest Region signed a memorandum of understanding that outlined the plan to provide a dementia patient-centered care education on a pilot medical unit for nursing staff (see Appendix D).

Interventions

The scholarly project was to develop a multi-faceted dementia patient-centered care process for Registered Nurses (RNs) and Certified Nursing Assistants (CNAs) in the acute care setting. The logic model (see Appendix C) identified the required project resources: dementia patient-centered care education, assessment of the clinicians' self-efficacy before and after the education, measurement of dementia knowledge, evaluation of the care plans, and EMR data of behavioral event episodes. Project resources included:

- Education plan: outlined the process to document behavioral and Code Gray activities in the patient event section of the EMR with an explanation that the information would be used to create reports associating behavioral events and patients with a dementia diagnosis.
- A sub-group of the Safe Care Committee SMEs developed the dementia patient-centered care education:
    - Used elements from the Gentle Persuasive Approaches program by Schindel Martin et al. (2016) and incorporated Adult Learning Theory;
    - Included elements from Kitwood's (1997) Dementia Person-Centered Care Model (see Appendix B);
    - Included dementia pathology; and

    - Discussed creating interventions in the care plan to communicate with clinicians and to connect with the patient with dementia.

- Dr. Schindel Martin, the primary author, gave permission (see Appendix E) to use the validated Self-Perceived Behavioral Management Self-Efficacy Profile (SBMSEP) (Schindel Martin et al., 2016) (see Appendix F), a survey that measures clinician self-efficacy.
- The Alzheimer's Association dementia knowledge questionnaires were used to measure the acquisition of dementia knowledge.
- The SMEs created a psychosocial comfort or safety care plan to individualize dementia patient-centered care.

Short Term Outcomes

Anticipated short-term outcomes of the scholarly project, after providing the dementia patient-centered care education to the pilot medical unit in the hospital, included (see Appendix C):

1. Behavioral and Code Gray events documented 50 percent of the time in the EMR structured data field (behavior and/or Code Gray), one, two, and three months after clinicians receive dementia patient-centered care education.
2. Dementia patient-centered care education with elements from Kitwood's (1997) Dementia Person-Centered Care Model and Adult Learning Theory is created and delivered at the May 2018 staff meetings on the pilot unit.
3. Clinician self-efficacy increases by 20 percent as evidenced by comparing the pre- and post-Self-Perceived Behavior Management Self-Efficacy Profile

(SBMSEP) scores (see Appendix F) immediately after and one month after the education.

4. Clinician dementia knowledge increases by 20 percent as evidenced by comparing the pre- and post-dementia knowledge questionnaire scores (see Appendix G) immediately after the education.
5. At the staff meetings, 95 percent of the clinicians complete the SBMSEP and post-expanded-SBMSEP with two questions related to dementia interventions and barriers to implementing dementia interventions prior to and following the education (see Appendices F and H). Instruction for participation is provided at the beginning of the staff meeting (see Appendix I).
6. On the pilot unit, 40 percent of clinicians complete the expanded-SBMSEP at the June staff meetings (see Appendix H).
7. A majority of the clinicians, 90 percent, report satisfaction in the education evaluation survey after the education (see Appendix J).
8. Clinicians complete expanded-SBMSEP survey at the June staff meetings, with 50 percent identifying at least one intervention used routinely in the care of their patients with dementia (see Appendix H).
9. Care plan utilization increases 50 percent with at least one patient-centered care intervention individualized to the dementia patient, captured in the data report one, two, and three months after the education (see Appendix K).
10. Behavioral events decrease in the data report by one or more in comparison of one month prior and one, two, and three months after the education (see Appendix K).

Long Term Outcomes

The long-term outcomes will not be evaluated by the scholarly project. They are expected within two to three years following the implementation of the dementia patient-centered care education (see Appendix C).

11. Significant clinician injury per employee health report is reduced ten percent associated with clinicians receiving dementia patient-centered care education.
12. The healthcare system adopts the dementia patient-centered care education for clinicians working on inpatient care units, as part of hospital orientation within two years after the education pilot.
13. Ninety percent of hospital clinicians providing care receive dementia patient-centered care education within two years of the successful education pilot.
14. Dementia patient-centered care education is modified based on pilot clinician survey feedback following completion of the education.
15. Safe Care Committee reports a ten percent decrease in clinician injury associated with the care of patients with dementia in the healthcare system annual report. The estimated cost savings is approximately $80,000, based on the assumption of reducing injuries by one individual in a year.
16. Care plans for patients with dementia: 95 percent contain at least one individualized intervention one year after the education, per chart audit.
17. Behavioral and Code Gray events decrease by ten percent for patients with dementia compared to the year prior to the education.
18. The healthcare organization has a 95 percent documentation compliance rate of behavior and Code Gray events correlated with the clinician injury report.

Timeline

The timeline for the scholarly project dovetailed with the Safe Care Committee activities (see Appendix L) as part of a larger project to provide pathology-specific education. In 2017, the Safe Care Committee initially met bi-monthly then monthly starting in May of 2018.

The pilot unit was a 35-bed hospital medical unit with 90 RNs and CNAs. The pilot unit admitted approximately ten patients with dementia per week. The Nursing Director on the pilot unit endorsed the presentation of the dementia patient-centered care education for the May 2018 staff meetings.

The yellow paper copy of the SBMSEP survey and dementia knowledge questionnaire were administered to RNs and CNAs at the beginning of the pilot unit May 2018 staff meetings, prior to the education. A green paper copy of the expanded-SBMSEP survey, and a dementia-knowledge questionnaire were administered immediately following the education at the staff meeting. At the June staff meeting, the expanded-SBMSEP survey was to be administered by the pilot unit leadership team.

The hospital data analyst provided results of behavioral and Code Gray events, and care plan utilization. The data were pulled from the structured data fields on patients discharged in the data collection months with dementia diagnosis per the International Classification of Disease (ICD10). The objective of the analysis was to evaluate translation of education into practice, measured by behavioral and Code Gray events, and care plan utilization. Analysis of the

data occurred in the fall of 2018 with the results provided in the spring of 2019 to the Safe Care Committee and the University.

Measures

Appendix M outlines the data points collected for the scholarly project.

Outcome 1 compares behavioral and Code Gray events documented in the EMR with Code Gray events documented in the security log. The effectiveness of the clinician education on the pilot unit will be evaluated by comparing the documentation in the EMR with the security log, one month before and one, two, and three months after of the education.

While the EMR allows for better data collection, minor behavioral events will be absent in the security log as clinicians frequently do not call a Code Gray for verbal or minor behavioral events. There is an expectation that the number of behavioral and Code Gray events documented in the EMR may increase on the pilot unit, associated with the education for documenting behavioral events.

Outcomes 2, 3, 4, 5, 6, 7, and 8 are measured by the creation of the education, completion of surveys and questionnaires by the clinicians attending the dementia patient-centered care education at the staff meeting. The surveys and questionnaires include the SBMSEP survey (see Appendix F), dementia knowledge questionnaire from the Alzheimer's Association (see Appendix G), education evaluation survey (see Appendix J) and a question identifying dementia-specific interventions (expanded-SBMSEP) (see Appendix H). The yellow and green paper surveys will be collected immediately before and immediately after the education at the pilot unit staff meetings.

Outcome 9 is measured by a data analyst report of care plans on patients with dementia per ICD10, to identify the addition of patient-centered care intervention(s) (see Appendix K) one month before, then one, two, and three months after the education. The report will demonstrate whether interventions were included in the care plan and will be validated with the expanded-SBMSEP survey completed by the clinicians at the June staff meeting (see Appendix H).

Outcome 10 is measured by the data analyst report of documented behavioral and Code Gray events on patients with dementia per ICD10, that lists the number per patient (see Appendix K). The report captures the behavioral and Code Gray events one month before, then one, two, and three months after the education. Additionally, the report captures the length of stay (LOS) for the patient with dementia to evaluate average LOS.

The collected clinician injury information before and after the education does not establish the effectiveness of the dementia patient-centered care education. The reason the correlation cannot be made is because there are many variables and competing interventions associated with the care of the dementia patient that cannot be controlled by the DNP Project Manager.

Project Budget

This project was supported through generous in-kind support from the healthcare system and Safe Care Committee. The 2-3 Year Budget Plan (see Appendix N) accounts for the revenues and expenses within the project and identifies the cost to implement this project in a systematic manner, including the healthcare system’s Education Department commitment to provide education to

hospital units with dementia patients. The Budget Plan projected expenses of $30,559 and the Statement of Operations revenues are accounted by the in-kind support of the organization and the DNP Project Manager (see Appendices O and P). The revenue minus the expenses produces a zero-net-effect operating income over the three years, as noted in the Statement of Operations (see Appendix P). The project's higher expenses after the first year are based on the spread of the education beyond the pilot unit to additional hospital units providing care for patients with dementia.

Analysis

Quantitative Data Analysis

Outcome 1: Quantitative data were used to demonstrate the benefit of discrete patient event documentation in the EMR. The number of behavioral and Code Gray events documented in the structured data fields in the EMR were compared with the security log of Code Gray events on the pilot unit, one month before, then one, two, and three months after the education was completed. A filter based on patient discharge date included the number of behavioral and Code Gray events per patient month and the average patient's LOS.

Outcomes 3 and 5: The Self-Perceived Behavioral Management Self-Efficacy Profile (SBMSEP) (Schindel Martin et al., 2016) is a ten-item, seven-point Likert-type, pre- and post-survey, that measures the clinician's self-reported self-efficacy with dementia patient-centered care (see Appendix F). Responses for each question range from the nominal value of "one" for strongly disagree to "seven" for strongly agree. The aggregate mean score for each question on the

pre-test and post-test was calculated for comparison analysis. The pre- and post-survey results were also analyzed by clinician role and years on the unit.

Outcome 4: The Alzheimer's Association dementia knowledge questionnaire is six questions on common myths and general dementia knowledge (see Appendix G). The intent of the questionnaire was to identify clinicians' baseline knowledge and whether education increased their dementia knowledge. The number of correct pre- and post-education answers was compared with a goal of a 20 percent increase in the post-education score.

Outcome 7: Clinician reported greater than 90 percent satisfaction following education attendance, using a six-item, five-point Likert-type scale education evaluation survey. Responses for each question range from the nominal value of "one" for strongly disagree to "five" for strongly agree (see Appendix J). Demographic data captured the clinicians as the number of RNs and CNAs of total attendees of the total possible attendees.

Qualitative Data Analysis

Outcomes 5, 6, and 9: For qualitative analysis, two questions were added to the SBMSEP creating an expanded-SBMSEP survey. The questions were to identify which interventions the clinicians used after attending the education and to identify implementation barriers. The two descriptive questions related to interventions and barriers associated with dementia care in the acute care setting (see Appendix H). Intervention adoption barriers were sorted into the following categories: resources, clinician knowledge, patient behaviors, family expectations, and environmental (Glover et al., 2014). The responses to the

questions were analyzed based on clinician role. The plan was to share the intervention adoption barrier responses with Safe Care Committee stakeholders to identify how to increase adoption. While the issues may not be new, the responses would identify common clinician barriers.

Outcome 7: Clinicians completed an education evaluation survey with two open-ended questions to improve the content provided in the dementia patient-centered care education.

Outcome 8: Clinicians who completed the expanded-SBMSEP survey at the June staff meetings after attending the education (four to six weeks prior) identified two interventions used routinely in the care of their patients with dementia (see Appendix H).

Outcome 10: The data report provided the number of behavioral and Code Gray events on patients with dementia to compare the month before and one, two, and three months after education to determine if there were fewer events after the education. The data analysis of the EMR reports identified the creation of care plans as incorporation of the education.

The different measurements and data analysis of outcomes three through nine provided a triangulated evaluation of the effectiveness of the education.

Ethical Considerations

Ethical Considerations and Protection of Participants

Clinicians may report ethical issues associated with the care of the dementia patient such as ageism, high resource utilization, and clinician frustration with the patient's family for placing the patient in a hospital setting.

One goal of the education was to increase sensitivity and awareness of the dementia patient's needs, with the recognition that one education event may not be enough to have a measurable effect.

Typically, CNAs have little formal education beyond high school, with only a couple of weeks of training. The CNAs' knowledge of dementia care is often based on experience, resulting in a potential for bias since the dementia patient population requires significant resources, communication and negotiation skills in contrast to other patient populations. The RNs may defer difficult dementia care to CNAs, which places CNAs at greater risk for injury and putting patients at risk of unintentional maleficence. The DNP Project Manager completed the Collaborative Institutional Training Initiative (CITI) program course (Appendix Q).

Conflicts of Interest

The staff meetings were led by the pilot unit leadership team rather than the DNP Project Manager to minimize participant conflict of interest. A potential conflict surrounded that clinicians may have felt coerced to complete the survey. To mitigate this potential ethical conflict, instruction was provided at the beginning of the staff meeting to inform participants that completion of the surveys was voluntary (see Appendix I). The survey being voluntary may have contributed to a lower rate of survey completion (Harrington & Nicoteri, 1999; Issel, 2014; Newcomer, Hatry, & Wholey, 2015).

Biases

To offset confidentiality concerns and to promote honest answers by the attendees, the survey tools collected minimal demographic information: role and

years on the pilot unit (0 to 3 years, between 3 to 5 years, and greater than 5 years).

Threats to Quality

Clinicians tend to transition to different employment opportunities during the summer. Attendance was a concern for the education, completion of the surveys, questionnaires, and evaluations in the month following the education. Another potential threat was clinicians not completing the surveys, either not at all because it was voluntary or only doing the pre-survey and not the post-survey.

Based on the literature and hospital practice experience, patients with dementia are considered at high-risk for developing delirium. An additional quality threat was the multiple, independent activities in the healthcare system that focused on delirium and other behavioral prevention interventions. The Safe Care Committee attempted to coordinate activities that promoted clinician and patient safety as it related to patients with behavioral health history. Unfortunately, the large number of clinician injuries and staff turnover during the project timeframe created the need for unit directors to create additional interventions focused on promoting clinician and patient safety. This may be a confounding variable when conducting audits on the use of individualized dementia patient-centered care interventions as they may be from other education sources. As an example, the DNP Project Manager coordinated plans with the hospital volunteers to include a delirium prevention intervention as part of the dementia patient-centered care education to minimize another dementia education initiative on the pilot unit.

Institutional Review Board (IRB) application and Project determination

A Letter of Determination from the hospital in the Northwest Region identified the Scholarly Project as a quality improvement project and not research (see Appendix R). This Letter of Determination was reviewed and accepted by the Boise State University IRB (Communication available upon request).

Results

Steps of the Intervention

Per the request of the pilot unit leadership, the dementia patient-centered care education was shortened to 20 minutes from the planned one hour. Input from the Safe Care Committee and pilot unit leadership assisted in modifying the education following a review of dementia education on the pilot unit the past year. The shortened timeframe required eliminating the clinician interaction and discussion, the communication challenges, and a lot of the dementia pathology.

Each staff meeting began with a brief introduction of the scholarly project and purpose of the dementia patient-centered care education (see Appendix I). The education was presented by the DNP Project Manager to four out of five pilot unit staff meetings in May 2018. The Nursing Director presented at the last staff meeting without collecting pre- and post-surveys when the staff meeting schedule was adjusted to accommodate another presenter.

The May pilot unit staff meetings attendance had 44 (46%) of the potential 94 clinicians. The first and second staff meetings each had seven, and the third and fourth staff meetings each had six clinicians complete the pre-education surveys. The fifth staff meeting had 18 potential participants who did not

complete the pre- and post-education surveys because the education was not presented by the DNP Project Manager due to a last-minute meeting schedule adjustment. Yellow paper-and-pencil pre-SBMSEP survey and dementia knowledge questionnaire were administered and collected at the beginning of the staff meeting, prior to the education. Immediately following the education, a green paper-and-pencil expanded-SBMSEP survey and dementia questionnaire were administered. The number of attendees completing the post-surveys were three (42%) from the first meeting, seven (100%) from the second meeting, five (83%) from the third meeting, and four (67%) from the fourth meeting.

Additional opportunities to provide the education were discussed with the pilot unit educator to address the low staff-meeting attendance. Education focus areas were patient event documentation, creation of the dementia care plan with dementia interventions, and communication. A flyer, pilot unit newsletters, and daily huddle reminders communicated the education content targeting all of the pilot unit staff, for the months of May and June 2018.

In mid-May, the healthcare system initially cancelled one summer meeting, then it cancelled all meetings through the end of September 2018 due to budgetary concerns. The meeting cancellations prevented administering the planned, expanded-SBMSEP in June, which prevented the comparison of the results to those obtained from the May staff meetings.

The DNP Project Manager worked with the pilot Nursing Director and educator to determine other means to solicit staff feedback on the patient behavioral and Code Gray documentation and utilization of the dementia care

plan. The Nursing Director enlisted her leadership team to encourage the practice changes and to solicit staff feedback. The pilot unit staff reported difficulty identifying the dementia patients and using the patient-centered care interventions. In addition, the pilot unit highlighted issues with documenting patient behavioral and Code Gray events in the EMR because the new EMR format did not allow clinicians to document a comprehensive note.

It took three months to obtain the ICD10 codes due to a decrease in the number of Safe Care Committee meetings and access to the providers from May through July. The dementia related ICD10 codes were needed by the hospital data analyst to create the EMR reports. In the end, the DNP Project Manager solicited the hospital coders for the ICD10 codes, then validated the information with the providers. The data report took two more months to complete, from mid-August through September 2018, due to data analyst staffing changes, the data analyst inexperience with the EMR documentation, and data validation challenges. The data report was finalized at the end of October 2018 instead of the beginning of September.

The first-year expense for the scholarly project noted on the Budget Plan (see Appendix N) was less than projected. Education was provided in the meeting room on the pilot unit, eliminating the classroom rental of $5600. Staff salary to attend the education was shortened to 20 minutes, one-third of projected cost of $2650. Six meetings were eliminated with the decision to decrease meetings, a savings of $2124. The final expenses for the scholarly

project were $21,008, less than the projected Year 1 expenses of $30,559 on the Budget Plan (see Appendix N).

Outcome Results

Appendix S contains a table of the outcomes evaluated.

Outcome 1: The report from the EMR used dementia associated ICD10 codes to identify the patients on the pilot unit. The data from the security log filtered patients greater than age 50 with a Code Gray event on the pilot unit (see Appendix T). In April, two behavioral or Code Gray events were documented in the EMR versus one in the security log. In June, both the EMR and security log contained two behavioral or Code Gray events. In July, zero behavioral or Code Gray events were documented in the EMR versus four in the security log. In August, four behavioral or Code Gray events were documented in the EMR versus zero in the security log.

Outcome 2: In May 2018, a shortened twenty-minute dementia patient-centered education was provided at five staff meetings on the pilot unit.

Outcome 3: The mean aggregate results for each question of the pre- and post-SBMSEP survey were compared (see Appendix U). The survey responses to questions of changes in the brain and why the person behaves in challenging manner showed an increase of 20 and 28 percent, respectively. For questions related to triggers, protecting self from defensive grab, and moving away from an unsafe situation, survey responses showed an increase of 13, five, and two percent. For questions related to communication and using music, food, or conversation, survey responses showed an increase of eight and five percent.

For questions related to backing off then slowly beginning care again, ensuring a calm environment, and protecting one's self from a reflex grab, survey responses showed a decrease by two, six, and two percent.

Outcome 4: The average dementia knowledge increased from an average of 3.0 to an average of 3.5 between the pre- and post-questionnaire of six questions, after the education (see Appendix U).

Outcome 5: Twenty-six clinicians completed the pre-survey and 18 completed the post-survey, this represents a 31 percent decrease from the completed pre-surveys (see Appendix U). Fatigue may have impacted survey completion, because several of the staff members were attending the staff meeting immediately after working the night shift.

Outcomes 6 and 8: The June staff meetings were cancelled, and the pilot unit leadership cancelled administration of the follow-up expanded SBMSEP survey. In June, the pilot unit leadership solicited feedback at their unit huddles and ad hoc on the patient event documentation and care plan usage.

Outcome 7: The education evaluation survey was not administered due to the shortened timeline for the education presentation at the May staff meeting.

Outcome 9: April had one dementia-specific care plan before the education presentation. After the education, June had six, and July and August each had one documented dementia care plan (see Appendix T).

Outcome 10: In April, there were 36 patients on the pilot unit with dementia diagnosis, with an aggregate mean LOS of 8.7 days, and two behavioral or Code Gray events documented in the EMR, compared to one Code

Gray event documented in the security log. In June, there were 45 patients, with an aggregate mean LOS of 7.5 days, and two behavioral or Code Gray events documented in the EMR, compared to two Code Gray events documented in the security log. In July, there were 28 patients, with an aggregate mean LOS of 3.8 days, and zero behavioral or Code events documented in the EMR, compared to four Code Gray events documented in the security log. In August, there were 27 patients, with an aggregate mean LOS of 7.9 days, and four behavioral or Code Gray events documented in the EMR, compared to zero Code Gray events documented in the security log (see Appendix T).

Missing Data

The cancellation of the June pilot unit staff meeting meant the expanded-SBMSEP survey could not be administered. The goal of the follow-up survey was to determine if staff's self-efficacy improved over time and if staff adopted interventions into their practice. The inability to develop the patient whiteboard within the EMR also prevented the capture the discrete data fields of specific dementia patient-centered care interventions.

Summary

The scholarly project did not demonstrate the EMR documentation of Code Gray or behavioral events as better or equal to the security log. Clinician self-efficacy slightly improved slightly (20 to 28 percent) in the area of understanding the why behind the patient behaviors. Clinician self-efficacy marginally improved, six to eight percent, related to communication with the dementia patient. Clinician self-efficacy decreased (two to six percent) related to

the use of dementia specific interventions. Dementia knowledge demonstrated slight improvement of 16 percent after the education. The month of June did demonstrate an increase in the number of dementia care plans (six), most likely driven from project-related messaging in the flyer, unit huddles, and newsletter. However, creation of dementia care plans was not sustained in July (one) and August (one). The percentage of dementia care plans created to number of dementia patients ranged from four to 13 percent, versus the goal of 50 percent. At this time, the mixed results and incomplete data makes it difficult to gain leadership sponsorship for expanding ongoing pathology-specific education to all staff who care for dementia patients.

Interpretation

Contextual Elements

Whenever there is a practice concern and a knowledge gap identified, education is immediately identified as a possible solution. The Safe Care Committee encouraged the development of the scholarly project to promote dementia patient-centered care education to align with the plan for pathology-specific education to decrease clinician and patient injury.

The scholarly project outlined in the logic model addressed issues found in the literature: poor staff attendance, varying timeframe lengths of education, budgetary concerns, and lack of outcomes data of a decrease in behavioral events (Adams-Fryatt et al., 2010; Martinez et al., 2015; Palmer et al., 2014; Pizzacalla et al., 2015; Schindel Martin et al., 2016; Teodorczuk et al., 2014). Anecdotally, the DNP Project Manager facilitates education programs and has

found low attendance for education programs are common because of time issues, length of education program, cost, and education topic.

The creation of the education plan was based on key elements identified by the authors: attendance, time, and content (Adams-Fryatt et al., 2010; Palmer et al., 2014; Schindel Martin et al., 2016). Unfortunately, the education time allotted at the staff meeting was modified from 60 minutes to 20 minutes, which required eliminating many of the elements identified to ensuring successful education as defined in the literature. The minimal difference in the scores from the pre- and post-SBMSEP surveys show marginal impact on the clinician self-efficacy in caring for patients with dementia. Theoretically, the use of case studies and discussions of communication interventions would have shown a more significant increase in self-efficacy. The low number of dementia care plans created on the pilot unit suggests the education was not adopted by the clinicians. As a side note, Schindel Martin is working on a shorter, interactive, on-line education product to encourage higher completion rates; a shorter variation from the four-hour Gentle Persuasive Approaches education.

The education program presentation at the staff meeting was to offset the attendance and budgetary concerns. The 46 percent staff meeting attendance was disappointing to the pilot unit leadership and the DNP Project Manager. The staff meetings were not required with pilot unit leadership discussing changes to require attendance. The timeline for the scholarly project required adjustment of the follow-up survey with the expanded-SBMSEP to be completed one month after the education instead of three months (Palmer et al., 2014). The

cancellation of the June staff meetings presented a challenge of obtaining a follow-up survey and comparison of post-expanded SBMSEP results. The pilot unit leadership was able to solicit clinician feedback related to the education content that will facilitate changes associated with the EMR.

The data report to identify the use of dementia care plans, a gap identified in the literature, did not show adoption of the education. The low number of behavioral and Code Gray events in the data report makes it difficult to analyze the results. The intent of the data report was to determine if the new EMR format was more effective, but the results were inconclusive.

The inconclusive data means changes to policies and guidelines in the healthcare system related to clinician injury related to patient care cannot be made. The risk management office and employee health department will need to continue to conduct a manual chart audit whenever an employee injury is reported during the care of the patient.

Healthcare system finances hampered the full implementation of the scholarly project as outlined in the logic model. During the study period, the healthcare system suspended all staff meetings, education programs, and activities not directly related to patient care. The pilot unit leadership team had to prioritize numerous unit activities, resulting in many unit activities being either cancelled or suspended. The financial situation created an uneasy situation for the RNs, CNAs, and unit leadership.

Associations between outcomes, interventions, and contextual elements

The healthcare system's financial situation also impacted the Safe Care Committee activities. Salaried staff were encouraged to take more vacation over the summer and an additional day or two surrounding holidays. Twice-weekly committee meetings decreased to once-a-month starting in May 2018, with many committee members frequently absent, which made it difficult to discuss the dementia education scholarly project. As a result of missing stakeholders, discussions were less than effective and made it difficult to obtain the ICD10 codes needed to create the data report. The limited presence of the key stakeholders impacted the activities surrounding the dementia project, creation for a patient whiteboard within the EMR for individualized interventions, and review of data with the Safe Care Committee. Overall, the scholarly project was not fully implemented as outlined in the logic model making it difficult to measure all the outcomes associated with the dementia patient-centered care education.

The 20-minute shortened education did not align with adult learning theory that identified discussion and sharing of experiences to engage clinical staff. This was reflected in the SBMSEP self-efficacy results having less than a ten percent improvement in the areas of communication (see Appendix U). At the staff meetings, the information on "backing off then slowly begin cares again" was presented with a decrease (-2%) was in the post-SBMSEP survey. The increase of the clinicians' self-efficacy was achieved in two out of the ten questions (changes in the brain and challenging behaviors).

The initial goal was to analyze the dementia patients average LOS per month with the number of behavioral and Code Gray events. The number of dementia patients and average patient days were difficult to analyze due to the large variation in the number of patients and LOS over the months data was collected. The behavioral and Code Gray event data required purposeful documentation in the EMR and security logs. Both the EMR and the security log were difficult to analyze and compare due to the small numbers, ranging from zero to four events per month (see Appendix T).

Limitations

The dementia patient-centered care education was not delivered to its full potential to facilitate interaction and clinician engagement on their current dementia care practices. Only 44 (46 percent) of the pilot unit staff received the education. Both of these factors limited the scholarly project's ability to show the incorporation of dementia patient-centered care. The creation of dementia-specific care plan and documenting behavioral and Code Gray event(s) is a purposeful manual process. For example, in June, six of the 45 patients with dementia had documented care plans (13 percent) and two behavioral and Code Gray events. The pilot unit staff identified concerns in recognizing dementia patients per discussions with the pilot unit leadership and the DNP Project Manager. Dementia patients, in the early phase of their disease, disguise their disability, creating a challenge in providing targeted dementia care. The provider on the Safe Care Committee stated providers are inconsistent with identifying the

patient's cognitive impairment with more than 50 ICD10 codes for dementia, further adding difficulty for clinicians to recognize the patient with dementia.

Conclusion

The goals of the scholarly project were to demonstrate that pathology-specific education (specifically dementia patient-centered care education) is an effective method as part of a larger Safe Care Committee project to decrease clinician injury and improve care for patients with behavioral problems. While there was an increase of clinician self-efficacy and dementia knowledge, it is difficult to know if the full implementation of the project would have produced better results. It is difficult to determine if the current EMR patient event documentation of behavioral and Code Gray events will serve as reliable source or if another method will still be needed.

Clinician injury impacts a healthcare system's finances; injuries affect scheduled work, require additional employees to cover an injured co-worker, reduce morale, and can potentially be career-ending for a clinician. The cost to replace a nurse is estimated to be $80,000, when considering recruitment, training, and unit coverage (Behavioral Meeting with D. Meyer, 2017).

Usefulness of the Work

Education without follow-up is not enough to sustain a practice change. There is evidence, for learning to occur, a person needs 20 hours of practice before it is incorporated into the person's routine (Kaufman, 2013). In June, there was an increase in the use of dementia care plans that most likely related to the pilot unit leadership disseminating education in huddles, unit newsletter, as

well as follow-up by the unit educator and the DNP Project Manager in the months of May and June. The shortened education at the staff meeting did not allow for staff to discuss methods to incorporate dementia person-centered care interventions (e.g. not incorporating the adult learning theory model).

Staff said it was challenging to identify patients with dementia on the pilot unit, impacting the creation of dementia care plans. Staff also reported being challenged by the difficulty of fully documenting patient events. For a practice to be implemented by clinicians, it needs to be easy, memorable, meet the desired needs of the staff, and demonstrate a positive outcome.

Sustainability

There needs to be a demonstration of the benefits of the education in order for the dementia patient-centered care education to be adopted on a hospital unit. While the scholarly project was not fully implemented as outlined due to the financial challenges in the healthcare system, the limited education presentation did demonstrate a positive impact in clinician self-efficacy. The use of staff meetings, as one venue to deliver education, facilitated standard dementia patient-centered care education and supported by the unit leadership.

The Safe Care Taskforce has created a plan for the System Behavioral Health Committee to manage the education activities for pathology-disease specific education when the taskforce dissolves in 2019. The system Education Department will take responsibility for providing the plan (with the pathology-specific education content) to the Unit Educators. The leaders on hospital units

caring for patients with behavioral diagnosis will be encouraged to share the education at staff meetings.

Implications for Practice and Further Study

This scholarly project created dementia patient-centered care education as part of the healthcare system's Safe Care Committee charge to create pathology-disease specific education to decrease clinician injury associated with caring for patients with behavioral problems. The Education Department plans to provide dementia patient-centered care education to new employees and units that provide dementia care. Clinician injury data will be tracked to demonstrate the effectiveness of the education.

The pilot unit identified two areas of concern that need to be addressed before future expectations for the dementia education in the healthcare system can be set. Several items associated with patient care were identified by the clinicians: difficulty identifying patients with dementia, lack of a trigger to prompt the creation of dementia care plan, and within the EMR the lack of a communication board to share the patient specific interventions. Second, the clinicians stated that they need to document a complete description of the behavioral or Code Gray events. Currently, the patient event text box in the EMR does not allow for a lengthy description. In the interim, the clinicians continue to document a progress note, not a discrete data field therefore not captured in the automated data report.

Next Steps

Once these concerns are addressed, the DNP Project Manager recommends another pilot be conducted on a different unit. To meet best practice, the education will need to be delivered using the adult learning theory format to allow for clinician engagement, discussion of individualized dementia-specific interventions, and sharing of communication challenges. The DNP Project Manager recommends that pre- and post- education surveys be limited to the SBMSEP and expanded-SBMSEP (see Appendices F & H) to measure the clinician self-efficacy as an education outcome. The SBMSEP contains two questions related to dementia knowledge, so the separate dementia knowledge questionnaire can be eliminated. This will reduce the evaluation time and the redundancy of a pre- and post-survey and questionnaire. Also recommended is to administer the post-expanded SMBSEP immediately after the education and again one month later to evaluate adoption of the education. The May 2018 pilot demonstrated the effectiveness of reinforcing the education program by providing information in unit huddles, newsletters, and flyers after the formal presentation. These reinforcing steps should be part of the education plan.

Collecting behavioral and Code Gray events from the EMR remains an important step in the data analysis of clinician injuries associated with dementia patient care. The low number of documented behavioral and Code Gray events in the EMR and the security log makes it necessary to extend the time frame to gather more data points to determine the effectiveness of the EMR as a source for data on behavioral and Code Gray events (see Appendix K). In addition to

extending the time frame, a recommendation will be to record the number of events by week rather than by month to minimize the variation of admitted patients with dementia on the unit.

Dissemination

As the population ages and the number of patients with dementia increases, the potential for clinicians to be injured in the hospital setting will also increase. While this scholarly project provided information on the value of an educational intervention for clinicians to increase their self-efficacy related to dementia care, it was not able to correlate the education with the behavioral data. The results of the scholarly project will be shared with the Behavioral Health Committee as part of sharing the results of the larger projects by the Safe Care Committee to create pathology specific education. The scholarly project validated that more work is needed for the hospital to collect data regarding clinician injuries from interactions of patients with dementia or other behavioral problems. Without such data, interventions to improve patient care and decrease clinician injury will be difficult to measure and evaluate.

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Appendix A

Literature Review Summary Table - Johns Hopkins Nursing Evidence-Based Practice Synthesis and Recommendations Tool

EBP Question**:** During the hospital stay in an acute care setting, what will help clinical staff recognize and manage a dementia patient (> 65 years) prior to exhibition of behavioral activities that have caused physical injury to the patient and clinical staff.

Category (Level Type)	**Total Number of Sources/Level**	**Overall Quality Rating**	**Synthesis of Findings Evidence That Answers the EBP Question**
Level I · Experimental study · Randomized Controlled Trial (RCT) · Systematic review of RCTs with or without meta-analysis	1	1-A	Interventions effective for dementia patient Music Therapy – at least twice a week. Targeting patient familiarity or appropriateness (eg, jazz, 60's, classical) Patient Centered Care Education/Kitwood theory Multi- intervention to mitigate delirium possibly beneficial for ADRD. Highlights difficulty of implementing multiple interventions
Level II · Quasi-experimental studies · Systematic review of a combination of RCTs and quasi-experimental studies, or quasi-experimental studies only, with or without meta-analysis	3	2-A 1-B	Clinician education focusing on communication and patient centered care beneficial. Education targeting groups of clinical caregivers beneficial – focus on disease pathology, communication skills, safety – staff specific self-protective skills, team/patient/family debriefing & reassurance techniques.
Level III · Non-experimental study · Systematic review of combination of RCTs, quasi-experimental, and non-experimental studies, or non-experimental studies only · Qualitative study or systematic review of qualitative studies	3	1-A 2-B	Patient-centered care as standard of dementia care in China – integrated into government policy, guidelines and protocols – knowledge and attitude for competent dementia care Education program focusing to increase knowledge and skills to provide care for patient with ADRD with flexible sessions and multiple methods of instruction – simulation more positively received. Education focusing on negative attitudes and relevant practice changes – focus on learning about the patient ADRD patients require different care in hospital than other patients
Level IV · Opinion of respected authorities and/or reports of nationally recognized expert committees/ consensus panels based on scientific evidence	0		No guidelines or consensus panels found. The Netherlands had a consensus panel to put together a care model for dementia patients that is in early stages of being evaluated – very labor intensive.
Level V	1	1 – B	Canada – comprehensive approach including patient's family support. Group reviews difficult cases and creates plan of care.

· Evidence obtained from literature reviews, quality improvement, program evaluation, financial evaluation, or case reports · Opinion of nationally recognized expert(s) based on experiential evidence			

Recommendations Based on Evidence Synthesis and Selected Translation Pathway
Behavioral problems are a problem in the acute care setting per the literature. Unfortunately, there is negligible data or literature outlining the degree of the behavioral problems in the acute care setting, especially in the absence of staff injury. The systematic reviews identify two interventions for managing patients with behavioral problems based on randomized controlled trials in long term care and home settings. Several studies demonstrated education targeting clinical staff have improved clinician self-efficacy to better manage patients with dementia with anecdotal evidence in one study of a decrease in behavioral problems. As a scholarly project, dementia focused education for clinicians appears to show benefits in an acute care setting.

Date: April 15, 2017 From: Newhouse, Dearholt, Poe, Pugh, and White, 2007

Appendix B

Person-Centered Care

Kitwood's Model shows that when caring for, and supporting people with dementia, we must remember six psychological needs: love, comfort, identity, occupation, inclusion, and attachment.

Retrieved from https://reflections705.wordpress.com/2017/03/25/the-flower-of-emotional-needs/

WHAT CAN YOU DO TO PROMOTE AN ENVIRONMENT OF PERSON-CENTERED CARE?

Ask the individual questions pertaining to their interests and preferences. Use an assessment tool to capture this information and pass it along to other staff who may find it useful.

Listen to the individual! Even if an individual cannot talk, they are communicating their needs and interest to you.

Incorporate individual preferences and interests into their care plan, activities of daily living, and recreation/leisure opportunities.

Plan activities, events, care, etc. around individual's desired schedule.

Adapt experiences to the individual's ability and level of functioning.

Adopted from The EPASS and EPASS Toolkit were created through graduate classwork at Temple University. Retrieved from https://epasstoolkit.com/about/

Appendix C
Logic Model Table (Kellogg)

Resources/Inputs	Activities	Outputs	Outcomes: Short term	Outcomes: Long term	Impact
Patient behavioral event and Code Gray data	Identify standard method and location to record behavioral events in EMR	Documentation of behavioral event in EMR	Behavioral events documented 50% in the same location in the EMR one month after clinicians receive education	10% reduction in significant clinician injury associated with care of the dementia patient per employee health report within six months of clinicians receiving education	20% decrease in dementia patients exhibiting behavioral events per behavioral event data 3 years after dementia patient-centered care education program.
Self-Perceived Behavior Management Self-Efficacy Profile (SBMSEP)	Utilize SBMSEP to measure clinician perception of their care for patient with dementia	Pilot unit clinicians complete SBMSEP pre- and post-attending the "Dementia Patient-Centered Care" education program	Clinician self-efficacy scores r/t dementia care increased 20% immediately after attending "Dementia Patient-Centered Care" education (comparing the pre-post SBMSEP).	90% of clinicians providing hospital bedside care received "Dementia Patient-Centered Care" education within 2 years of successful pilot program (phase I of project)	"Dementia Patient-Centered Care" education program incorporated into standard orientation curriculum for hospital clinicians
Safe Care Committee education subgroup (Clinical Educators, Nurses, Social workers)	Create "Dementia Patient-Centered Care" education for clinicians	Clinicians on pilot unit complete dementia knowledge questionnaire pre- and post-attending the "Dementia Patient-Centered Care" education program	Clinician dementia knowledge increased 20% after attending "Dementia Patient-Centered Care" education (comparing the pre/post dementia knowledge questionnaire)	Hospital adopted (100%) "Dementia Patient-Centered Care" education for bedside clinicians 2 years after pilot program as part of hospital orientation.	Clinicians with increased knowledge of dementia person-centered care
"Dementia Patient-Centered Care" education	Create questionnaire to evaluate staff knowledge of dementia patients and dementia care	Just-in-time "Dementia Patient-Centered Care" education created for clinicians unable to attend the full education program.	95% of pilot unit clinicians complete the pre & post-test surveys after attending the dementia education. 40% of pilot unit clinicians complete expanded SBMSEP survey at June staff meeting.	"Dementia Patient-Centered Care" education modified per pilot clinician feedback to improve program from staff survey at 30 and 90 days post education program attendance.	Clinicians report familiarity with dementia care
Safe Care Committee as dotted line to the System Behavioral Health Council with Administration Support & Employee Safety/Health	Identify measures of success to attain by the 3-year strategic plan in 2020	Data for clinician injury associated with disease specific/patient pathology at hospital	Clinician satisfaction following education program attendance reported >90% as beneficial and worth attending.	Safe Care Committee validated 10% decrease in clinician injury associated with care of dementia patient in Health System annual report used for inpatient units budgeting money for clinician education	Clinicians experience 20% decrease in injuries by patients with dementia exhibiting behavioral event(s) per employee health annual report three years after adoption of education program.

Clinical Nurse Specialist/Clinical Specialist	Present “Dementia Patient-Centered Care” education for clinicians	Clinicians on pilot unit (RNs and CNAs) attend dementia patient-centered care education program	50% of clinicians identify 2 interventions used in care of dementia patient, one month after the education. 50% of care plans on the pilot unit included one to two person-centered care intervention(s) individualized to the dementia patient per chart audit one, two and three months after education.	95% of care plans on dementia patients in the SLHS hospital had 1-2 individualized patient-centered care intervention one year after “Dementia Patient-Centered Care” education per chart audit.	95% of clinicians (RNs) care plans create and incorporate individualized dementia patient-centered care interventions.
Behavioral event and Code Gray data reports	Conduct an audit of behavioral and Code Gray events clinicians encounter (before and one, two, and three months after education	Education to clinicians on method and location in EMR to document behavioral event	Reduction of one behavioral event compared to prior to the education program	10% reduction of “Code Gray” events associated with dementia patients within two years of education compared to prior to education program	Support education to Clinicians (RN’s and CNAs) within health system

Modified 3.2.2018

Appendix D

Memorandum of Understanding

This is withheld at the request of the healthcare system. The DNP Project Manager retained a signed copy.

Appendix E

Ryerson University

Daphne Cockwell School of Nursing
Faculty of Community Services

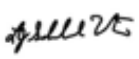
PERMISSION TO USE SBMSEP FOR DNS PROJECT

Faculty Member: Dr. Lori Schindel Martin
Student: Kimiko Krutz
Date of Permission: Tuesday, January 9, 2018

Dear Kimiko,

Thank you very much for contacting me to discuss permission to use the Self-Perceived Behavioural Management Self-Efficacy Profile (SBMSEP) as part of the project you will be completing to satisfy requirements for your doctoral graduate program at Boise State, Idaho. It was delightful to speak with you and members of your graduate studies advisory committee in late fall 2017. Since our teleconference, I have discussed this with Advanced Gerontological Education (AGE) the not-for-profit social service enterprise that maintains the integrity of the SBMSEP through their Research & Development (R & D) Committee. I am the Chair of the AGE R & D Committee, and I use the SBMSEP (originally developed by me) extensively for my own scholarly work focusing on educational interventions to mitigate the behavioural and psychological symptoms of dementia (BPSD). The AGE R & D Committee is pleased to give you permission to use the SBMSEP to evaluate the educational program you will be using for your scholarly doctoral project at Boise State. This permission is granted with the understanding you will use the SBMSEP for the sole purpose of your scholarly doctoral project at Boise State. We ask that you do not distribute the SBMSEP manual (attached in PDF format to this email, dated January 9, 2018) to any other parties, in either hard copy or electronic format, and that you destroy the attached PDF and associated files within a reasonable time after completion of your project, e.g. within one year to 18 months after you complete your doctoral project, according to the procedures outlined by your graduate program at Boise State. We would be very interested to receive a short summary of your project after its completion so that we can file it in our records as an example of a graduate student project that has used the SBMSEP as an outcome measure. This could be in the format of a 350-500 word abstract for our record keeping purposes. If you have any questions about the permission or the use of the SBMSEP after reviewing the manual, do not hesitate to contact me. Best of luck with your project, Kim.

With warm regards, and yours in gerontological nursing,



Lori Schindel Martin, RN, BA, BScN, MSN, PhD
Associate Professor, Daphne Cockwell School of Nursing, Ryerson University, Toronto, Ontario, CANADA
Chair, Research & Development Committee, Advanced Gerontological Education (AGE)
President-Elect, Canadian Gerontological Nursing Association (CGNA)

Appendix F

AGE Advanced Gerontological Education

Enhancing the care of older adults by learning together

Self-Perceived Behavioural Management Self-Efficacy Profile (SBMSEP)

GPA Gentle Persuasive Approaches

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The SBMSEP was developed by Dr. Lori Schindel Martin, PhD, Associate Professor, Daphne Cockwell School of Nursing, Ryerson University

Appendix F

Date:_____

Job Title (circle Response): RN CNA PSA

How many years on unit (circle response): 0 - 3yrs >3yrs – 5 yrs >5 yrs

Self-Perceived Behavior Management Self-Efficacy Profile (SBMSEP)

This section of the survey is designed to assess your overall feelings of competence when responding to episodes of aggression. For each skill, circle the number which best reflects your feelings of confidence toward the skill. Be honest with yourself. This survey is anonymous, and all information reported will remain strictly confidential.

When I care for a person with dementia who is upset and agitated, I am confident that…..	1=Not Very Confident 7=Confident
I have a clear understanding of how changes in the brain associated with dementia result in responsive, challenging behaviors.	1 2 3 4 5 6 7
I can figure out **why** the person is reacting in a responsive (catastrophic), challenging way.	1 2 3 4 5 6 7
I can identify **triggers** that result in responsive (aggressive) challenging behaviors	1 2 3 4 5 6 7
I **back off momentarily** when I sense that the person is becoming agitated, then **slowly begin cares again** when the patient is calmer, and repeat these as conscious, purposeful steps	1 2 3 4 5 6 7
I can ensure a calm environment	1 2 3 4 5 6 7
I can appropriately use the suitable and respectful self-protective techniques in response to a reflex grab.	1 2 3 4 5 6 7
I can appropriately use the suitable and respectful self-protective techniques in response to a defensive grab.	1 2 3 4 5 6 7
I can bring the person away from an unsafe situation or away from an altercation with another person.	1 2 3 4 5 6 7
I know what communication strategies that will help de-escalate the person.	1 2 3 4 5 6 7
I know how to divert the person's anxiety with music, food, drink, pictures and quiet conversation.	1 2 3 4 5 6 7

Permission from Lori Schindel Martin on 1/9/18

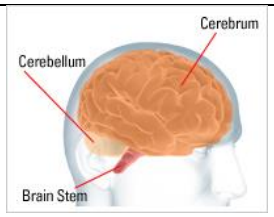
Appendix G

Date:_____

Job Title (circle Response): RN CNA PSA

How many years on unit (circle response): 0-3yrs >3yrs – 5 yrs >5 yrs

Dementia Knowledge Questionnaire

How many of these young women, shown here in their 20s during World War II, might have Alzheimer's disease today? ☐ 1 ☐ 2 ☐ 3	
Which of these famous Americans had Alzheimer's disease? ☐ Screen legend Rita Hayworth ☐ U.S. President Ronald Reagan ☐ Beloved artist Norman Rockwell ☐ Civil rights icon Rosa Parks ☐ All of the above	
What is the main part of your brain involved in thinking, remembering, solving problems or taking a quiz? ☐ Cerebrum ☐ Cerebellum ☐ Brain stem	
Three of these answers are good ways to help keep your brain healthy, and one is a myth. Which one is the myth? ☐ Eat a diet low in fat and cholesterol, and rich in dark-skinned fruits and vegetables ☐ Stay mentally active ☐ Avoid aluminum ☐ Exercise 30 minutes most days	
How often can Alzheimer's be accurately diagnosed? ☐ 10 percent of the time ☐ 50 percent of the time ☐ 90 percent of the time ☐ Almost never	
Which answer best describes what Alzheimer's is? ☐ A modern word for "senility" ☐ A fatal disease ☐ Memory loss as you grow older	

Open Source from Alzheimer's Association – retrieved 10/15/17

http://www.alz.org/alzheimers_disease_nadm_quiz.asp

Appendix H

Date:_____

Job Title (circle Response): RN CNA PSA

How many years on unit (circle response): 0 - 3yrs >3yrs – 5 yrs >5 yrs

Expanded Self-Perceived Behavior Management Self-Efficacy Profile

This section of the survey is designed to assess your overall feelings of competence when responding to episodes of aggression. For each skill, circle the number which best reflects your feelings of confidence toward the skill. Be honest with yourself. This survey is anonymous, and all information reported will remain strictly confidential.

When I care for a person with dementia who is upset and agitated, I am confident that…..	1=Not Very Confident						7=Confident
I have a clear understanding of how changes in the brain associated with dementia result in responsive, challenging behaviors.	1	2	3	4	5	6	7
I can figure out **why** the person is reacting in a responsive (catastrophic), challenging way.	1	2	3	4	5	6	7
I can identify **triggers** that result in responsive (aggressive) challenging behaviors	1	2	3	4	5	6	7
I **back off momentarily** when I sense that the person is becoming agitated, then **slowly begin cares again** when the patient is calmer, and repeat these as conscious, purposeful steps	1	2	3	4	5	6	7
I can ensure a calm environment	1	2	3	4	5	6	7
I can appropriately use the suitable and respectful self-protective techniques in response to a reflex grab.	1	2	3	4	5	6	7
I can appropriately use the suitable and respectful self-protective techniques in response to a defensive grab.	1	2	3	4	5	6	7
I can bring the person away from an unsafe situation or away from an altercation with another person.	1	2	3	4	5	6	7
I know what communication strategies that will help de-escalate the person.	1	2	3	4	5	6	7
I know how to divert the person's anxiety with music, food, drink, pictures and quiet conversation.	1	2	3	4	5	6	7

Question: What activities will you put into practice?

Question: What are the barriers to implementing the dementia interventions?

Permission from Lori Schindel Martin on 1/9/18

Appendix I

Instruction to the Pilot Unit

Thank you to the leadership team for allowing this presentation of the scholarly project associated with my seeking a doctorate in nursing practice. This project is part of a larger health care system initiative associated with Safe Care. My project is a quality improvement plan to develop a dementia person-centered care education program to reduce staff injury associated with the care of the patient with dementia. Part of the project involves completing surveys immediately before and after the education at this staff meeting. The anonymous surveys will take approximately 5 minutes to complete. In addition, there will be another survey at the June staff meeting. The results of the survey will be shared with the Safe Care Committee to identify the benefits of the education program to reduce staff injury. Participation to complete the survey is voluntary. Choosing not to participate has no impacts on the benefits you may receive from the education. Your completion of the survey is greatly appreciated.

Appendix J

Job Title (circle Response): RN CNA PSA

How many years on unit(circle response): 0 - 3yrs >3yrs – 5 yrs >5 yrs

Education Evaluation Survey

Please provide feedback on the dementia patient-centered care education as the information will help us in the delivery of future education programs. 1=Strongly Disagree 5=Strongly Agree	
The introduction explained the purpose of the education.	1 2 3 4 5
The delivery style of the education was effective.	1 2 3 4 5
The education is relevant to my practice.	1 2 3 4 5
There was enough time for the education.	1 2 3 4 5
The education was beneficial.	1 2 3 4 5
The instructor was effective in the education delivery.	1 2 3 4 5
What would you like to have seen in the education?	
What would improve the education?	

Appendix K

Audit Tool
Behavioral or Code Gray Event & Dementia Intervention Chart Review

Chart Review:

- Before Education (one month)
- After Education (one month)
- After Education (two months)
- After Education (three months)

Number	Length of Stay	Dementia Intervention Yes/No	Intervention Type	Behavioral Event or Code Gray Documented Yes/No	# of Code Gray Events/ Hospital Stay	# of Behavioral Events/ Hospital Stay

Key Dementia Interventions:

A = Activity
C = Communication (eg., glasses, hearing aid, right ear, etc)
D = Distraction
E = Environmental
F = Food
S = Schedule

Appendix L
Timeline

Project: Minimizing clinicians experiencing injury associated with care of the patients with dementia																			
Activity: Planning	Spring 2017	Summer 2017	9/17	10/17	11/17	12/17	1/18	2/18	3/18	4/18	Summer 2018	9/18	10/18	11/18	12/18	1/19	2/19	3/19	4/19
Literature Review																			
Mission, Vision, problem statement																			
Outline Timeline																			
Project Logic Model, Goals & Outcomes																			
CITI training																			
Identify members of committee																			
Form Committee to facilitate project: clinicians – subset of Safe Care taskforce																			
Create committee charter and outline project plan																			
Committee meet bi monthly-Stakeholder																			

Activity: Planning	Spring 2017	Summer 2017	9/17	10/17	11/17	12/17	1/18	2/18	3/18	4/18	Summer 2018	9/18	10/18	11/18	12/18	1/19	2/19	3/19	4/19
Identify data collection tool to measure behavioral event																			
Identify clinician self-efficacy tool for before and after intervention																			
Join Alzheimer's Association					Member assist with review		Identify member to co-teach												
Create RN, CNA & PSA education material for patient-centered care																			
Identify pilot unit																			
Seek project approval from administration																			
Prepare IRB project submission				BSU faculty	BSU faculty	BSU faculty	SLHS Mentor	IRB	IRB	IRB									

Activity: Project Implementation	Spring 2017	Summer 2017	9/17	10/17	11/17	12/17	1/18	2/18	3/18	4/18	Summer 2018	9/18	10/18	11/18	12/18	1/19	2/19	3/19	4/19
Promote project – Pilot Units																			
Identify and train the educators																			
Data collection of events on pilot unit – pre-& post education																			
Administer pre-& post survey to staff																			
Education to pilot unit clinicians																			
Activity: Data Analysis																			
Final Scholarly report																			
Dissemination																			

Appendix M
Data Table
Quality Improvement: Increase Hospital Staff Self-Efficacy with Care of Dementia Patient to Reduce Injury

Outcome(s)	Resources (human, financial, organizational and community)	Data (Indicators)	Method to Gather Data	Technical Assistance	Associated Cost Yes or No
Behavioral events documented 50% in the same location in the EMR one month after clinicians receive education.	• Pilot Unit Staff (RN's & CNA) • PSA • Educators (pilot unit and education department) • Pilot Unit Leadership • Safe Care Committee • Security • IHT (create report) • Information/Education flyer – r/t documentation • $ for education material	• Security Log of Code Gray Events (manual) • Event reports/ dementia diagnosis in EMR • # of dementia patients on pilot unit (during time period collection of events) • Dementia patient LOS –avg one month before education and one, two, and three months after education (avg of 30 days)	• Review Security log (HIPPA concern- need method to purposefully r/t code gray with dementia diagnosis- along with being selective for time frame to collect information – manual review). • IHT created report based on discrete data in EMR (event & dementia diagnosis). • IHT report – Dementia LOS (time period per data)	• No (Security log is manual extraction) • Yes • Yes	• No • No • No
Clinician self-efficacy r/t dementia care increased 20% one month after attending dementia patient-centered care education	• Pilot Unit Staff (RN's & CNA) • Educators (pilot unit and education department) • Pilot Unit Leadership • Education – Dementia Patient-Centered Care • Education materials	• # of staff on pilot unit • # of staff completing education program • # of type of staff – RN & CNA • # of staff completing survey at pre, immediate post, & post 4 – 6 weeks	• Pilot unit staff census noting # and role type • Attendance log at staff meeting • Survey tool –before start of education – in meeting room	• Yes • Yes • Yes • Yes	• No • Yes – paid times to attend • Yes – paid for time to take survey

(comparing the pre-post self-efficacy survey).	• Safe Care Committee Leadership • Safe Care Committee Education Sub-group • Alzheimer's Association representative • Dementia Care Content Expert • $ for education material • Survey tool– SBMSEP	• Comparison of grouped survey results • # of type of staff completing survey • % completion of survey compared to meeting attendance	• Survey tool – completed immediately post education. • Data Analysis Tool/Excel	• Yes	• Yes – paid for time to take survey • No
50% of care plans on the pilot unit include at least one patient-centered care intervention(s) individualized to the dementia patient per chart data collection one, two and three months after education.	• Pilot Unit Staff (RN's) • Educators (pilot and education department) • Pilot Unit Leadership • Education – Dementia Patient-Centered Care • Education materials • Safe Care Committee Education Sub-group • Alzheimer's Association representative • Dementia Care Content Expert • $ for education material	• # of dementia patients on pilot unit one, two, and three months after education • # of dementia patients with dementia care plan • # of interventions specific for dementia & individualized on each patient noted in care plan	• Report on # dementia patient on pilot unit • Data of care plans on the dementia patient one, two, and three months after education • Data captures dementia specific interventions • Review data report of frequency and types of interventions on dementia patient on pilot unit • Data Analysis Tool/Excel	• Yes • Yes • Yes • No • Yes	• No • No • No • No • No
Clinician dementia knowledge increased 20% after attending dementia patient-centered care	• Pilot Unit Staff (RN's & CNA) • Educators (pilot and education department) • Pilot Unit Leadership • Education – Dementia Patient-Centered Care • Education materials	• # of staff on pilot unit • # of staff completing education program • # of type of staff – RN & CNA • # of staff completing dementia knowledge	• Pilot unit staff census noting # and role type • Attendance log • Survey tool –before start of education – in meeting room	• Yes • Yes • Yes	• No • Yes – paid time to attend • Yes – paid for time to take survey

education (comparing the pre/post dementia knowledge questionnaire)	• Safe Care Committee Education Sub-group • Alzheimer's Association representative • Dementia Care Content Expert • Budget for pilot unit staff education • $ for education material • Budget for educators • Dementia knowledge questionnaire tool– Knowledge Survey	survey at pre/post education • Comparison of grouped survey results • # of type of staff completing survey • % completion of survey compared to meeting attendance	• Survey tool – immediately post education • Data Analysis Tool/Excel	• Yes • Yes	• Yes – paid for time to take survey • No
Clinician satisfaction following education program attendance reported >90% as beneficial and worth attending.	• Pilot Unit Staff (RN's & CNA) • Educators (pilot unit and education department) • Pilot Unit Leadership • Education – Dementia Patient-Centered Care • Education materials • Safe Care Committee Leadership • Safe Care Committee Education Sub-group • Alzheimer's Association representative • Survey tool– satisfaction	• # of staff on pilot unit • # of staff completing education program • # of type of staff – RN & CNA • # of staff completing satisfaction survey post education • # of type of staff completing survey • % completion of survey compared to attendance	• Pilot unit staff census noting # and role type • Meeting attendance log • Survey tool – immediately post education • Data Analysis Tool/Excel	• Yes • Yes • Yes • Yes	• No • Yes – paid time to attend • Yes – paid for time to take survey • No
60% of pilot unit clinicians complete the pre & post SBMSEP survey &	• Pilot Unit Staff (RN's & CNA) • Educators (pilot unit and education department) • Pilot Unit Leadership	• # of staff on pilot unit • # of staff completing education program • # of type of staff – RN & CNA	• Pilot unit staff census noting # and role type • Meeting attendance log	• Yes • Yes	• No • Yes – paid time to attend

questionnaire immediately after dementia education.	• Education – Dementia Patient-Centered Care • Education materials • Safe Care Committee Leadership • Safe Care Committee Education Sub-group • Dementia Care Content Expert • $ for education material • Survey tool– SBMSEP	• # of staff completing survey at pre, immediate post, & post 30 day • Comparison of grouped survey results • # of type of staff completing survey • % completion of survey compared to attendance	• Surveys–before start of education – in meeting room • Survey – immediately post education. • Data Analysis Tool/Excel	• Yes • Yes • Yes	• Yes – paid for time to take survey • Yes – paid for time to take survey • No
40% of clinicians identified in a survey, two interventions used routinely in their care of dementia patients one month after attending education program.	-Pilot Unit Staff (RN's & CNA) -Educators (pilot unit and education department) -Pilot Unit Leadership -Education – Dementia Patient-Centered Care -Education materials -Safe Care Committee Education Sub-group -Alzheimer's Association representative -Dementia Care Content Expert -$ for education material -Survey tool– open comment/interventions	• # of staff on pilot unit • # of staff completing education program • # of type of staff – RN & CNA • # of staff completing survey at 30 days post education • # of type of staff completing survey • % completion of survey compared to class attendance	• Pilot unit staff census noting # and role type • Meeting attendance log • Survey question solicited at unit staff meeting after completion of education • Data Analysis Tool/Excel	• Yes • Yes • Yes • Yes	• No • Yes – paid time to attend • No • No
		• # Staff injury on pilot unit – 90 day report before education and 90 days data after education	• Staff injury report from employee Health of pilot unit	•	•

Appendix N
Two to Three Year Budget Plan

Revenues	Budget Year 1	Budget Year 2	Budget Year 3	Rationale
Health System Organization – In Kind DNP Student – Scholarly Project – In Kind	$28,616 $2,440	$38,486 $579	$59,425.50 $875.50	Safe care committee Project
Expenses				
Administrative/Office **Supplies** • Printer Cartridge, Case of Paper	 $130	 $30	 $130	 Cartridge (2 years)
Facilities • Meeting Room • Classroom	 $5200 $400	 $2400 $1600	 $2400 $3600	2 x month 1st year then 12 meetings/year Pilot unit - 1st year, 4 units – 2nd year, 9 units – 3rd year
Education Related • Education Materials • Recording • Dementia Self-Efficacy Tool • IHT – Event Report • Marketing/Promo	 $25 $100 $0 $250 $10	 $100 0 0 0 $40	 $225 0 0 0 $90	Pilot unit - 1st year, 4 units – 2nd year, 9 units – 3rd year \ - One time cost / Adding units each year, letters to leaders, flyers
Total:	6,115	4,170	6,445	
Wages & Salary **Advisory Board (safe care committee)** • Chair ($40/H + 35% Fringe) • Psychiatrist ($90/H + 35% Fringe) • CNS/MSN ($40/H + 35% Fringe) • Social Worker ($22/H + 35% Fringe) • Security ($30/H + 35% Fringe) • Employee Safety/QI ($20/H + 35% Fringe) • Admin Assistant ($20/H + 35% Fringe)	 $1404 $3159 $1404 $780 $702 $1053 $702	 $661 $1487 $661 $363 $330 $496 $330	 $674 $1517 $674 $370 $336 $506 $336	All staff get + 2% raise/year \ \ 26 meetings – 1st year 12 meetings – 2nd & 3rd / /
Total:	$9204	$4328	$4413	

Expenses cont….	Budget Year 1	Budget Year 2	Budget Year 3	Rationale
Educators/Developers/Evaluators • Clinical Educators from Class (2) ($30/hour + 35%Fringe) • Clinical Nurse Specialist (2) Stakeholder, Auditor, Coach ($40/hour+ 35% Fringe)	$1,134 $2,592	$661 $432	$3,033 $1011	Development plus revisions based on staff feedback Pilot Unit – 1st year, 4 units – 2nd year, 9 units – 3rd year
• DNP Student – Modify Tools, Quiz and Satisfaction Survey ($40/hour+ 35% Fringe)	$364	0	0	Scholarly Project Data Analysis Tools - One time
Staff Training • Clinical Staff – RN (Salary ~$30/hour + 35% Fringe) X #/unit • Clinical Staff – CNA (Salary ~$14/hour + 35% Fringe) X #/unit • Unit Educator (train the trainer) (Salary ~$30/hour + 35% Fringe) X #/Units • Educators for New Employees Salary ~$30/hour X 4 hrs X #/dpt)	Pilot Unit $1,700 $950 0 0	Expansion $6,936 $3,876 $661 $661	Expansion $15,912 $8,892 $1,516 $1516	All Staff – 2% Raise/Year 1st year - One pilot unit 2nd year – 4 units 3rd year – 9 units -Training provided at staff meeting (2 meetings/unit) -Approximately 100 staff/unit -Educators to coordinate education & coach (unit and new employees)
Management & Operations Salary • Project Manager (Salary ~$30/hour + 35% Fringe X FTE)	$8,500	$17,340	$17,680	1st year – 0.2/FTE 2nd and 3rd year – 0.4/FTE with project expansion
Total:	$15,240	$30,567	$49,560	
Grand Total	$30,559	$39,065	$60,418	

Appendix O

Expense Report - Intervention on Pilot Unit for Clinician Injury Prevention

Source of Expense	Expense Description	Type of Cost (Fixed or Variable)	Description of Cost	Expense Per Unit	Estimated Volume	Dollar Value
Administrative/Office						
Supplies						
• Printer Cartridge	Replacement	Variable	Printing – 2 years worth	$100	1 each	$100
• Paper	Printing -	Variable	Quiz and Handouts	$30	1 case	$30
Facilities						
• Meeting Room (27/year)	Rental - Conference Rm with skype ability	Fixed	Room for Safe Care Committee	$200	27 Mtgs	$5,400
• Classroom	Rental - Classroom	Fixed	Pilot Unit – Ed Program	$200	2 Mtgs	$400
Education Related						
• Education Materials	Education Materials	Variable	Handouts for 100 people	$25	1 set	$25
• Recording	AV	Fixed	Recording Access	$100	1 Episode	$100
• Dementia Self-Efficacy Tool	Fee to Author (one time)	Fixed	Usage Fee	$0	1 Tool	$0
• Marketing/Promo	Flyers & Newsletter	Fixed	Promotional for Pilot Unit	$10	1 Unit	$10
• IHT – Event Report	Report Creation	Fixed	IHT Department Charge	$250	1 Report	$250
Total:						$8,915
Wages & Salaries						
Advisory Board (safe care committee)						
• Chair	Salary	Fixed	$40/H + 35% Fringe	$54/H	30 Mtgs	$1,620
• Psychiatrist	Salary	Fixed	$90/H + 35% Fringe	$121.5/H	30 Mtgs	$3,645
• CNS/MSN	Salary	Fixed	$40/H + 35% Fringe	$54/H	30 Mtgs	$1,620
• Social Worker	Salary	Fixed	$22/H + 35% Fringe	$29.70/H	30 Mtgs	$891
• Security	Salary	Fixed	$20/H + 35% Fringe	$27/H	30 Mtgs	$810
• Employee Safety/QI	Salary	Fixed	$30/H + 35% Fringe	$40.5/H	30 Mtgs	$1,215
• Admin Assistant	Salary	Fixed	$20/H + 35% Fringe	$27/H	30 Mtgs	$810
Total:						$10,611

Educators/Developers/ Evaluators • System Clinical Educators - (2)	Salary – Education Development	Fixed	($30/H+35%Fringe) X 10H	$405	2 Staff	$810
• Clinical Educators Instruct (2)	Salary - Instructors	Fixed	($30/H+35% Fringe) X 4H	$162	2 Staff	$326
• Clinical Nurse Specialist/Clinical Specialist (CNS/CS) • Clinician-CNS/CS	Salary – Stakeholder/ Development Salary – Chart Audit & Data Analysis	Fixed Fixed	($40/H + 35% Fringe) X 4H ($40/H + 35%Fringe) X 20 H	$ 216 $1,080	2 Staff 2 Staff	$432 $2,160
• Clinician • Clinician • Clinician	Salary – Modify Tool Salary – Create Dementia Quiz Salary – Create Staff Satisfaction Tool	Fixed Fixed Fixed	($40/H + 35%Fringe) X 2H - Self-Efficacy Tool ($40/H + 35%Fringe) X 4H ($30/H + 35%Fringe) X 1H	$108 $216 $40.5	1 Staff 1 Staff 1 Staff	$108 $216 $40
Total:						$4,090
Clinical Staff • Personnel – RN • Personnel – CNA • Project Manager	 Salary - Attend Ed Salary – Attend Ed Operations - Salary	 Fixed Fixed Fixed	 $25/H + 35%Fringe $14/H + 35%Fringe ($40/H + 35%Fringe) X 250H (Part-time)	 $34/H $19/H $8,500	 50 Staff 50 Staff 1 Staff	 $1,700 $ 950 $8,500
Total:						$11,150
Grand Total						$30,559

3/2/2018 v4 Kim Krutz

Appendix P

Statement of Operations

Statement of Operations		
Revenues – 3 years		
Health Organization	$126,647.50	
DNP student	$3,894.50	
	Total	***$130,542***
Expenses		
Administrative		
• Supplies	$290	
• Facilities	$15,600	
• Education Related	$1,340	
Wages and Salaries		
• Advisory Board	$17,945	
• Educators/Developers/Eval	$9227	
• Staff Training	$42,620	
• Management & Operations	$43,**520**	
	Total	**$130,542**
Operating Income		***0$***

Appendix Q

Collaborative Institutional Training Initiative (CITI)

CITI PROGRAM

Completion Date 22-Jul-2017
Expiration Date 21-Jul-2020
Record ID 23649740

This is to certify that:

Kimiko Krutz

Has completed the following CITI Program course:

Human Research (Curriculum Group)
Social & Behavioral Researchers (Course Learner Group)
1 - Basic Course (Stage)

Under requirements set by:

Boise State University

CITI

Verify at www.citiprogram.org/verify/?wb35f4303-1684-47fb-92dc-83bbb75caa9e-23649740

Appendix R

Letter of Research Determination

This is withheld at the request of the healthcare system. The DNP Project Manager retained a signed copy.

Appendix S

Outcomes Evaluation Table

Outcome	**Data Collection Instrument/Data**	**Analysis Goal**	**Analytic Technique**
A reduction of one behavioral or Code Gray event comparing data report of dementia patients on the pilot unit prior and one, two and three months after the dementia education.	**Instrument**: Data report of patients with dementia on the pilot unit using same process as evaluating dementia interventions. Data for the month prior and one, two, and three months after the dementia patient-centered care education provided to clinicians (Appendix J) Data elements collected: • Code Gray log information collected by the security department for patient from pilot unit listed in the log: Yes or No • Data report of behavioral and Code Gray events in the EMR on one patient with dementia: Yes or No • Number of behavioral and Code Gray events on one patient with dementia. • Length of stay (LOS) of the patient with dementia admitted during the months of analysis. **Data**: Presence of behavioral and Code Gay in EMR per discrete data points: nominal data. **Eligible charts for sample chart audit**: Patients with diagnosis/co-diagnosis of dementia (ICD code) on the pilot unit. • No patient healthcare information is assessed or evaluated in this project beyond behavioral and Code Gray events, LOS, and the patient's plan of care with dementia specific interventions • No patient health information (patient name, date of birth, admission date) is included on the audit tool • No patient medical records are copied when reviewing data report. • Data report will be locked in DNP project manager's office and computer.	To quantify the number of behavioral and Code Gray events before and after the dementia patient-centered care education on the pilot unit.	Descriptive statistics: Data report provides numeric data for determining nominal count of behavioral and Code Gray events on patients with diagnosis/co-diagnosis of dementia on the pilot unit. DNP project manager will obtain data report from analyst for one month prior and one, two, and three months after the dementia patient-centered care education with the goal of collecting data for months identified. The DNP project manager will identify the discrete data fields for the data report to capture the key elements. Note: The patient chart audit is to assess only for the presence of behavioral and Code Gray events, length of stay and dementia specific interventions on the care plan that indicates translation of education into practice.

Outcome	Data Collection Instrument/Data	Analysis Goal	Analytic Technique
Development of Dementia Patient-Centered Care Model Education and Adult Learning Theory (April 2018). Delivery of Dementia Patient-Centered Care Model Education at May 2018 pilot unit staff meeting. 95% of pilot unit clinicians at the unit staff meeting completed Self-Perceived Behavior Management Self-Efficacy Profile (SBMSEP) prior & expanded-SBMSEP immediately following education by May 2018. Clinician self-efficacy r/t dementia care increased 20% immediately after dementia patient-centered care education. 40% of pilot unit clinicians completed Expanded SBMSEP at June staff meeting after attending education at May unit staff meeting. June survey, 4 to 6 weeks after education, 50% of clinicians identified one intervention in their care of dementia patients.	SBMSEP (Schindel Martin et al., 2016) is a ten item, seven-point Likert-type, pre- and post-survey to measure the clinician's self-reported competence of dementia patient-centered care (Appendix F) **Question and Scoring**: • The questions are common situations encountered when working with dementia patients. • The seven-point Likert score: 1= strongly disagree to 7 = strongly agree. **Data elements collected include**: • Job title: RN, CNA, PSA • Years on the Unit: Between 0 to 3 years, greater than 3 to 5 years, and greater than 5 years **Data:** Clinical staff rank their perception of their confidence to provide care for the patient with dementia. The pre-survey serves as a baseline followed by post-Expanded SBMSEP (Appendix H) to identify differences after the dementia patient-centered care education. A repeat expanded SBMSEP survey of staff conducted at June staff meeting. Scores are arithmetically calculated with a score in the column of pre, post, and June results in the each question row. • The pre, post and June survey will be sorted and grouped using the clinician's role and years on the pilot unit. • One open-ended question added to the June survey: name 2 dementia nterventions used in your practice.	To quantify the staff's self-perceived self-efficacy as it relates to providing care for the patient with dementia pre- and post-dementia patient-centered care education. To determine if the dementia education caused an increase in the clinician's self-efficacy as it relates to providing care to the patient with dementia. To determine if self-efficacy sustained or improved 4 to 6 weeks after the education. To identify two dementia patient-centered care interventions that clinicians use 4 to 6 weeks after attending dementia education.	Descriptive statistics: comparison by time on the pilot unit, aggregate mean scores for each survey question item using a pre-then-post design and by job titles. Based on principles of participatory evaluation designed as paper and pencil survey. SBMSEP was identified in the literature following 10 years of practice in a long term care setting then utilized in an acute care hospital. The survey was selected based on validity/reliability testing, ease of administration, ease of scoring, and degree that question items reflected the information desired by the stakeholders.

Outcome	Data Collection Instrument/Data	Analysis Goal	Analytic Technique
95% of pilot unit clinicians at the unit staff meeting completed dementia knowledge questionnaire prior and immediately following dementia patient-centered care education by May 2018. Clinician dementia knowledge increased 20% after dementia patient-centered care education by May 2018.	**Instrument**: Dementia knowledge questionnaire from the Alzheimer's Association. Six questions related to dementia pathology, myths associated with dementia and dementia prevention interventions (Appendix G) Data elements collected include: • Job title: RN, CNA, PSA • Years on the Unit: Between 0 to 3 years, greater than 3 to 5 years, and greater than 5 years **Data**: The pre-questionnaire serves as a baseline for dementia knowledge with the post-quiz to measure difference following attendance of the dementia patient-centered care education. • Scores are arithmetically calculated with a score in the column of pre, and post in each question row. • The pre, and post quiz will be sorted and compared by role and years of experience on pilot unit.	To quantify if the dementia education caused an increase in the clinician's dementia knowledge	Descriptive statistics: comparison of aggregate mean scores for each question using a pre-then-post design following the educational intervention. Based on principles of participatory evaluation designed as paper and pencil questionnaire. Questionnaire selected based on ease of use, ease of administration, small number of questions, ease of grading, comparing pre- and post-education intervention, and questions from recognized national organization.
95% of pilot unit clinicians at the unit staff meeting provided a collection of items or responses identified as barriers to dementia care in the acute care hospital setting.	**Instrument:** One open-ended question at the end of an expanded-SBMSEP immediately following attendance of education program: "what are the barriers to implementing dementia interventions" (Appendix H) **Data:** Responses that can be grouped by barrier categories identified from the literature: resources, clinician knowledge, patient behaviors, family expectations, and environmental (hospital-setting).	Identify participants' perception of barriers to providing care for patients with dementia from a qualitative group of barriers (Asomaning et al., 2015; Schindel Martin et al., 2016)	Summary of comments from participants regarding awareness of identified barriers by category. Data to be shared with safe care committee.

Outcome	Data Collection Instrument/Data	Analysis Goal	Analytic Technique
95% of pilot unit clinicians at the unit staff meeting completed education evaluation immediately following dementia person-centered care education by May 2018. Clinician satisfaction following education program reported >90% as beneficial and worth attending.	**Instrument**: An education evaluation assessing the dementia patient-centered care education (Appendix I) Question and Scoring: • The questions associated with education content. • The five-point Likert-type score: 1= strongly disagree to 5 = strongly agree. • One open-ended questions to solicit "what they would like to have seen in the education" • One open-ended question to solicit "What would improve the education" Data elements collected include: • Job title: RN, CNA, PSA • Years on the Unit:0 to 3 years, greater than 3 to 5 years, greater than 5 years **Data**: Clinician satisfaction will be measured following the education program attendance. • Scores are arithmetically calculated using an overall percentage scale. • The number of evaluations collected will assist in detemining rate of completion by the pilot unit compared to the number of staff meeting attendees. • Scores and responses to open-ended questions will be further sorted by job title.	To quantify if the education was satisfactorily received by the clinicians. To identify modifications needed for the education program.	Descriptive statistics: aggregate percentage for the evaluation tool. Qualitative collection of open-ended questions to be used to determine need to modify education – to be shared with the safe care committee and the Unit based educators. The separation by job title will assist with determining education needs and job role perspective receipt of information

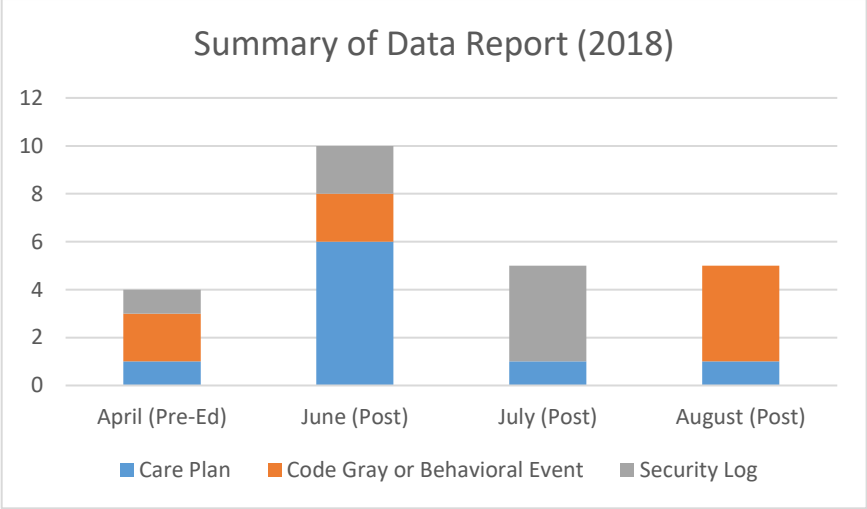
Outcome	Data Collection Instrument/Data	Analysis Goal	Analytic Technique
50% of care plans on the pilot unit include at least one patient-centered care intervention(s) individualized to the dementia patient per data report one, two, and three months after dementia patient-centered care education.	**Instrument**: Data report of patients with dementia (ICD code) on the pilot unit. Data for the month prior and one, two, and three months after the dementia patient-centered care education provided to clinicians (Appendix J) Data elements collected: • Data report of discrete data. • Psychosocial safety or comfort care plan present on patient with dementia: Yes or No • Individualized patient-centered care interventions on care plan: Yes or No • Intervention fits one of the following categories: food, environmental, schedule, distraction, communication, and activity (Charlesworth et al., 2015) • Length of stay (LOS) of the patient with dementia admitted during the months of analysis. **Data**: Presence of dementia interventions identified in chart audit if documented in patient record: nominal data. **Eligible charts for sample chart audit**: Patients with diagnosis/co-diagnosis of dementia (ICD code) on the pilot unit. • No patient medical information is assessed or evaluated in this project beyond behavioral or code gray events, LOS, and the patient's plan of care • No patient health information (patient name, date of birth, admission date) is included in the audit • No patient medical records are copied when reviewing the electronic health record • Data report will be locked in DNP project manager's office	To determine if the dementia patient-centered care education caused an increase in the addition of individualized dementia interventions to the care plan. To quantify the percentage of care plans of dementia patients containing specific dementia interventions in monthly sampling of eligible dementia patient charts on the pilot unit prior and one, two and three months after providing dementia education.	Descriptive statistics: Chart audits provide numeric data for determining nominal count and percentage of dementia person-centered care interventions. DNP project manager will obtain data report from analyst for one month prior and one, two, and three months after the dementia patient-centered care education with the goal of collecting data for months identified. The DNP project manager will identify the discrete data fields for the data report to capture the key elements. Note: The patient chart audit is to assess only for the presence of behavioral and code gray events, LOS and dementia specific interventions on the care plan that indicates translation of education into practice.

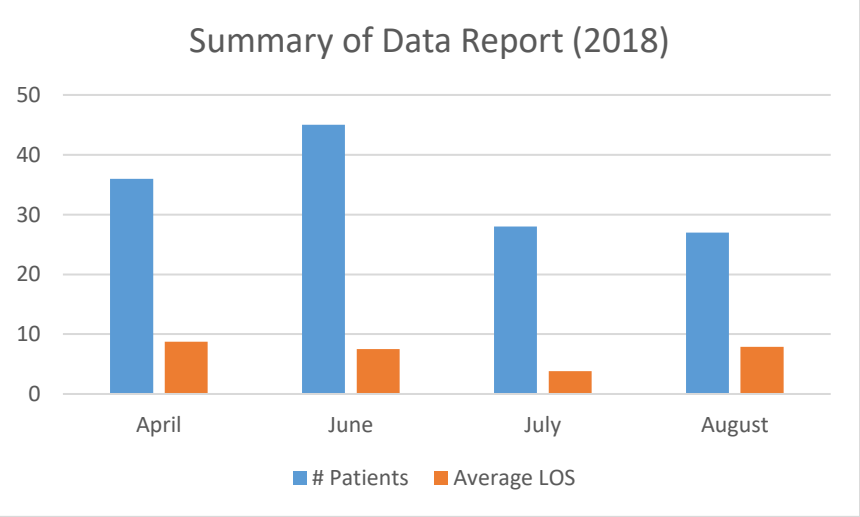
Appendix T

Summary of Data Report

Month	# Patients	Average LOS	Care Plan in EMR	Code Gray or Behavioral Event in EMR	Security Code Gray Log
April	36	8.72	1	2	1
June	45	7.51	6	2	2
July	28	3.8	1	0	4
August	27	7.9	1	4	0

Pre-education – April (2018)
Post-education- June, July, August (2018)





Appendix U

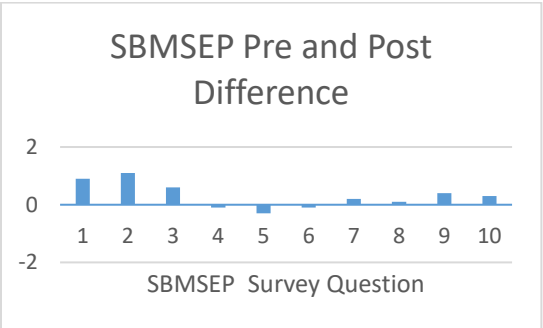
Completed Surveys Results

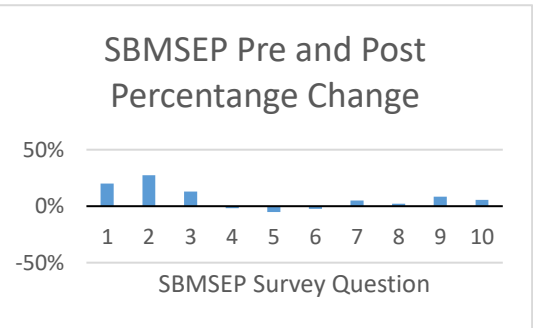
-Self-Perceived Behavior Management Self-Efficacy Profile
-Expanded SBMSEP (Post)

Demographic: RNs & CNAs	**Pre**	**Post**
Years 0-3	12	13
Years 3-5	5	3
Years >5	7	3
CAPs	4	3
RNs	22	15

Completed SBMSEP Results	**Pre**	**Post**	**% Change**
Number Completed	26	18	-31%
1. I have a clear understanding of how changes in the brain associated with dementia result in responsive, challenging behaviors.	4.5	5.4	20%
2. I can figure out **why** the person is reacting in a responsive (catastrophic), challenging way.	4	5.1	28%
3. I can identify **triggers** that result in responsive (aggressive) challenging behaviors	4.6	5.2	13%
4. I **back off momentarily** when I sense that the person is becoming agitated, then **slowly begin cares again** when the patient is calmer, and repeat these as conscious, purposeful steps	5.9	5.8	-2%
5. I can ensure a calm environment	5.9	5.6	-6%
6. I can appropriately use the suitable and respectful self-protective techniques in response to a reflex grab.	4.4	4.3	-2%
7. I can appropriately use the suitable and respectful self-protective techniques in response to a defensive grab.	4.1	4.3	5%
8. I can bring the person away from an unsafe situation or away from an altercation with another person.	4.5	4.6	2%
9. I know what communication strategies that will help de-escalate the person.	4.8	5.2	8%
10. I know how to divert the person's anxiety with music, food, drink, pictures and quiet conversation.	5.4	5.7	6%

Likert Scale 1 (Not Very Confident) to – 7 (Confident)





Interventions identified after the education (on Expanded SBMSEP)

- Establishing routines
- Utilizing HELP program
- Stepping away with escalation
- Introduce self every time
- Schedule
- Identify triggers
- Slow communication
- Reintroduce/explain situation
- Communicate with families
- Schedule as at home
- Reintroduce myself
- Always introduce myself
- Diversion using routine
- Utilizing family
- Always introduce myself
- Better assessing level of dementia
- Making a schedule
- Utilize Help program

Barriers by Category (on Expanded SBMSEP)

Resources	(Time constraints-XXX) (Staffing-XXXX)
Clinician Knowledge	(New staff-X) (Consistency of care b/t nurses-X) (Knowledge-XX)
Patient Behaviors	(Communication-X) (Patient Routines-XX) (New Environment-X)
Family Expectations	
Environmental	(Night shift -X) (Hospital routine-XXXX)

Completed Dementia Knowledge Questionnaire Results

	Pre	Post	% Change
# Completed	26	19	
Average Right	3	3.5	16%
Years 0-3	12	11	
Years 3-5	6	4	
Years > 5	7	3	
CNA	4	3	
RN	21	14	