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Development of a Standardized Oral Care Staff Education Program

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Walden University

College of Health Sciences

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Katrina DeToye

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2019

Abstract

Development of a Standardized Oral Care Staff Education Program

by

Katrina DeToye

MSN, Walden University, 2017

BSN, Walden University, 2014

Project Submitted in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Nursing Practice

Walden University

August 2019

Abstract

Hospital-acquired infections such as nonventilated hospital-acquired pneumonia (NV-HAP) are significant patient safety concerns. The lack of oral care in the nonventilated acute care patient population is a major contributor to NV-HAP. Nursing staff are on the frontline in the provision of oral care to hospitalized patients, but a lack of knowledge regarding the relationship between oral care and NV-HAP was identified as a gap in practice at the project site. The purpose of the project was to develop a staff education program on oral care of the nonventilated patient population. The practice-focused question addressed whether an evidence-based education for nurses regarding oral care for nonventilated patients could be developed and validated. Knowles's adult learning theory guided the use of evidence-based practice literature to develop the staff education program. The project team of 2 infection prevention specialists, a nursing professional specialist, and a nurse educator evaluated the education program, plan for delivery, and plan for evaluation of learning through an anonymous Likert-style evaluation survey. The 4 team members also completed program evaluation surveys, and results revealed a 100% score of agreed or strongly agreed that the program objectives were met. A descriptive analysis of the data provided information that supported the evidence-based education on oral care of nonventilated patients as a means of nurse education. When implemented, the project education will be part of a standardized oral care program to reduce barriers in delivering oral care. Social change implications are related to decreasing patients' risk of NV-HAP, increasing quality of life, and decreasing length of hospital stay.

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Table of Contents

Section 1: Introduction.....	1
Problem Statement.....	2
Purpose.....	5
Nature of the Doctoral Project.....	5
Significance.....	5
Summary.....	6
Section 2: Background and Context.....	7
Concepts, Models, and Theories.....	7
Relevance to Nursing Practice.....	8
Local Background and Context.....	10
Role of the DNP Student.....	11
Role of the Project Team.....	12
Summary.....	13
Section 3: Collection and Analysis of Evidence.....	14
Practice-Focused Question.....	14
Sources of Evidence.....	15
Analysis and Synthesis.....	16
Summary.....	16
Section 4: Findings and Recommendations.....	17
Findings and Implications.....	17
Recommendations.....	20

Contribution of the Doctoral Project Team	21
Strengths and Limitations of the Project.....	21
Section 5: Dissemination Plan	23
Analysis of Self.....	23
Summary.....	24
References.....	25
Appendix A: Stakeholder/Team Member Evaluation of DNP Project.....	30
Appendix B: Expert Panel Evaluation of Staff Education.....	31
Appendix C: Oral Care Algorithm.....	32

Section 1: Introduction

Hospital-acquired infections (HAIs) are emerging as a significant patient safety concern that is associated with an increased infection rate and inpatient mortality (Baker & Quinn, 2018). One of the major contributors to patient infection in the acute care setting is the lack of oral care maintenance of functional safeguards against pathogen invasion (Baker & Quinn, 2018). Bacteria found in the oral cavity is a causative agent in healthcare-associated pneumonia (HAP) (Baker & Quinn, 2018). Raghavendra, Mylotte, and Scannapieco (2007) found a 40% reduction in the rate of HAP after the introduction of an oral care intervention.

Staff education is key as nurses play a pivotal role undertaking oral health care, including identifying patients at risk for oral mucositis, inflammatory disease, and chronic infection, and assessing patients' ability to manage their oral care (Salamone, Yacoub, Mahoney, & Edward, 2013). There was not an oral care educational program for nonventilated patients at the project hospital facility, and current nursing staff did not have the proper education and training to manage their patients' oral care needs. Nurses require education on the importance of oral care for nonventilated patients as well as how to safely and effectively provide oral care to effectively decrease HAIs (Feider, Mitchell, & Bridges, 2010).

The purpose of the current project was to develop a staff education program regarding oral care of the nonventilated patient population. The planning of the staff education oral care program would demonstrate the effectiveness, adoption, and sustainability of patient-centered care to prevent HAIs. Findings from this project may be

used to improve the quality of care provided to nonventilated patients and reduce the additional resources used to care for patients who suffer complications from HAIs(see Nguh, 2016).

Problem Statement

According to Southern (2007), nurses have not had strong oral care education in their training and have expressed inadequate knowledge of oral health status and symptoms of abnormalities. The oral cavity is colonized with bacteria and is a potential source for oral, lung, and systemic infections (Baker & Quinn, 2018). Li, Kolltveit, Tronstad, and Olsen (2000) explained that teeth are the only nonshedding surfaces in the body, and bacterial levels can reach more than 10 microorganisms per mg of dental plaque, which can serve as a continual and substantial bacterial load. The absence of oral care demonstrates that the biofilm develops more rapidly in the oral cavity by doubling the harmful bacteria every 2 to 3 hours (Li, Kolltveit, Tronstad, and Olsen, 2000). Providing consistent oral care two to four times a day may decrease nonventilated hospital-acquired pneumonia (NV-HAP) by 40-60% (Baker & Quinn, 2018). Pneumonia is the second most common HAI with a rate between five and 20 cases per 1,000 hospital admissions (Baker & Quinn, 2018).The use of oral care education for the prevention of NV-HAP was associated with a decrease in the number of pneumonia cases from 31 to 16 (Kaneoka et al., 2015). Oral care is one of the fundamentals of care, but it is widely recognized that nursing staff dismiss it as a low priority (Salamone, Yacoub, Mahoney, & Edward, 2013).

Some of the reasons for noncompliance include lack of confidence, lack of appropriate oral health knowledge, lack of skills, and lack of insight into the high-risk consequences of poor oral health by nurses (Lewis, Edwards, Whiting, & Donnelly, 2018). Consistent oral care is the most common modifiable risk factor for the prevention of NV-HAP and has the potential to improve health care quality (Munro & Baker, 2018). After informal discussion with nursing leaders at the hospital, a knowledge gap was identified for Registered Nurses and patient care technicians at the hospital facility regarding the importance of oral care and the relationship between oral care and NV-HAP. After discussion among nursing leaders at the hospital, there was consensus that behavior and knowledge of nurses throughout the hospital demonstrated an oral care knowledge gap. The infection control leader (personal communication, December 14, 2018) stated that nursing staff were unaware of the correlation between oral care and NV-HAP.

The nurses at the project site noticed that their colleagues were not providing oral care to nonventilated patients at regular intervals, and when questioned the staff nurses demonstrated a lack of knowledge regarding the importance and benefits of oral care. The need for nursing staff knowledge regarding the importance of oral care in the nonventilated patient population was initially discussed with the lead infection prevention coordinator. The infection prevention coordinator had been making rounds to the facility's units and explaining the importance of oral care but found that most the nursing staff did not understand the implications to the patient regarding lack of oral care,

including that 20 billion microbes in human mouths replicate every 4 to 6 hours and lack of oral care leads to micro-aspirates of these harmful microbes (Baker & Quinn, 2018).

Nurse leaders started to make observations that oral care tools were not being provided to patients, which led nurse leaders to discuss new oral care kits with a local medical distributor to increase oral care at their facility. The medical distributor and project facility initiated an informal oral care audit that indicated how many patients had a toothbrush, toothpaste, and oral rinse and whether they had used them during their inpatient admission. The medical distributor also exchanged 20 toothbrush samples to be cultured so that the negative effects of the lack of oral care on nonventilated patients could be demonstrated. The results of the cultures showed that 45% of the toothbrushes were colonized with bacteria, and 30% tested positive for one or more multi-drug-resistant organisms. A basic oral care practice assessment of 112 patient-occupied rooms showed that 49% of patients did not have a toothbrush in the room or had a toothbrush but had not used it since admission.

A knowledge gap was identified for RNs and patient care technicians at the project facility regarding the importance of oral care and the relationship between oral care and NV-HAP. The knowledge gap in practice was that the nurses at the project site were not providing oral care and did not understand the importance and benefits of oral care. This project was significant to the field of nursing by increasing awareness of a simple intervention that has been shown to be effective in reducing the risk of NV-HAP, thereby lowering health care costs and improving patient safety and care.

Purpose

Standardized oral care is an essential preventative measure in decreasing infection and NV-HAP (Baker & Quinn, 2018). The purpose of this doctoral project was to develop a staff education program regarding oral care of the nonventilated patient population. The practice-focused question was whether an evidence-based education program for nurses regarding oral care for nonventilated patients would be developed and validated. Increased knowledge may assist nursing staff in understanding oral care techniques to prevent adverse effects for their patient population.

Nature of the Doctoral Project

The project consisted of the development of a staff education program regarding adequate oral care for nonventilated hospitalized patients in a Midwestern hospital. The education was developed based on a thorough review of the literature. The staff education program consisted of a staff education Power Point with an evidence-based oral care algorithm for staff use, the plan for delivery, and evaluation plan. After the staff education program was developed, the deliverables were given to the hospital project site to deliver and evaluate the program. Data were collected from the team of experts regarding their satisfaction with the planning process and leadership to evaluate the project.

Significance

Nursing staff are key stakeholders, and education regarding oral care practices can result in a significant improvement of the nursing staff practices and their ability to influence the clinical outcome of NV-HAP (Baker & Quinn, 2018). Patients are impacted

by consistent oral care that may reduce their risk for NV-HAP, reduce their length of stay, improve their quality of life, and increase their knowledge about oral care and its association with pneumonia (Munro et al., 2018). The health care facility is impacted by reducing NV-HAP, improving patients' access to care, reducing patients' length of stay, reducing patients' transfers to higher levels of care, and reducing cost by \$40,000 per case of NV-HAP prevented (Munro et al., 2018).

Nursing staff education on the importance of standardized oral care may encourage the ongoing learning of staff to maintain adequate oral care practices with nonventilated patients, may reduce NV-HAP, and may improve patient care and safety. Improved oral care of nonventilated patients may increase their quality of life, decrease their length of stay, decrease their risk for NV-HAP, and increase their likelihood of discharge to their prior living situation.

Summary

The nursing knowledge gap related to the lack of oral care among nonventilated patients was concerning due to the risk of NV-HAP and the decrease in patient quality of care and safety. The use of a staff education program in standardized oral care may increase the nursing staff's awareness of nursing best practice to improve patient outcomes.

Section 2: Background and Context

One of the major contributors to patient infection in the acute care setting is the lack of oral care maintenance. Functional safeguards against pathogen invasion and staff education are critical as nurses play a pivotal role in oral health care in the acute care setting. The practice-focused question addressed whether an evidence-based education program for nurses regarding oral care for nonventilated patients could be developed and validated. Inadequate oral care training in nursing curricula can lead to oral health care neglect of patients. Affirming oral health care as one of the fundamentals of nursing will improve patient outcomes (Lewis et al., 2018). The purpose of this doctoral project was to develop an evidence-based staff education program regarding oral care of the nonventilated patient population.

Concepts, Models, and Theories

Knowles's adult learning theory recognizes that adults are different learners than children, and they have unique learning styles. Knowles identified four principles that help teachers meet the needs of adult learners (Smith, 2013). The adult learning theory improves individual knowledge and skill and enhances organizational performance as learners apply the knowledge directly to their work (Wilson, 2012).

The key elements in adult learning theory are that adults need to know why they are learning a new skill, how learning will be conducted, what learning will occur, and why learning is essential to their position (Smith, 2013). The use of these elements will assist in the instructional design principles for the planning and delivery of staff education (Palis & Quiros, 2014). Candela, Piacentine, Bobay, and Weiss (2018) applied

adult learning theory to improve nursing student preparation on patient discharge teaching and demonstrated an alignment among the quality of teaching skills, enhanced patient engagement, and improved health outcomes.

Relevance to Nursing Practice

Missed nursing care is a substantial issue that has been shown to predict adverse events in patients. Kalisch (2016) found that mouth care was the most commonly missed aspect of nursing care, and the third most commonly missed element according to the nurses' perspective. According to Pettit, McCann, Schneiderman, Farren, and Campbell (2012), the nursing staff are professionals providing oral care in the acute care setting, but sources indicated that nursing staff do not receive adequate knowledge and training regarding oral care practice. Pettit et al. found that 52% of respondents reported their nursing education did not prepare them for oral care management. However, 95% of respondents felt oral health was important, 79% felt responsible for oral care, and 78.6% assessed the oral cavity of their patients (Pettit et al. 2012). Jenson (2018) identified a nursing staff knowledge gap regarding oral care and created an intervention that educates to the deficits in nursing staff knowledge and reduces barriers in delivering oral care. Providing comprehensive staff education resulted in improved staff knowledge regarding the importance of oral care and coaching their patients regarding the importance of oral health habits (Jenson, 2018).

The project site facility used the Modified Beck Oral Assessment Scale to assess patients' oral health and guide their care. The Modified Beck Oral Assessment Scale is used to assess lips, gums, oral mucosa, tongue, teeth, and saliva and includes a score

interpretation to guide the frequency of care. A score of 0 to 5 indicates no dysfunction and to provide oral care every 12 hours, a score of 6 to 10 indicates mild dysfunction and to provide oral care every 8-12 hours, a score of 11 to 15 indicates moderate dysfunction and to provide oral care at least every 8 hours, and a score of 16 to 20 indicates severe dysfunction and to provide oral care at least every 4 hours (Yurdanur & Yagmur, 2016). The recommendation to improve oral care practice was to survey the participants' knowledge before and after the education program to assess the knowledge gained on oral care importance, tools, and assessment.

Park and Choi-Kwon (2011) presented nursing staff with an oral care education program regarding the consequences of inadequate oral care and oral care hygiene techniques and found that the program was effective in improving the oral health of residents and enhanced the nursing staff's knowledge, attitude, and behavior toward oral care. A survey by Costello and Coyne (2008) showed that 90% of respondents viewed oral care as an essential aspect to nursing care but that nurses lacked adequate knowledge of oral care practices and needed educational updates.

Studies have shown that nursing staff have the knowledge of adequate oral care of patients, but a gap is present regarding nursing staff's understanding of the adverse effects of inadequate oral care. The nonventilated acute care patient is susceptible to adverse effects such as oral pain, difficulty swallowing, compromised nutritional intake, systemic infection, and pneumonia (Salamone et al., 2013). In a study conducted by Magill et al. (2018), HAP accounted for 25% of all HAIs, with 65% consisting of NV-HAP. This project addressed the knowledge gap in practice through the development of

an education program regarding proper oral care and the tools and assessments needed to perform adequate oral care.

Local Background and Context

The project site infection control leader (personal communication, December 14, 2018) stated that when discussing oral care importance and NV-HAP that nursing staff were unaware of the correlation between the two factors. Nurse leaders observed that oral care tools were not being provided adequately to patients, which led leaders to discuss new oral care kits with a local medical distributor to increase oral care at their facility. The medical distributor and project facility initiated an informal oral care audit that indicated how many patients had a toothbrush, toothpaste, and oral rinse and whether they had used them during their inpatient admission. The medical distributor also exchanged 20 toothbrush samples to be cultured so that the negative effects of the lack of oral care on nonventilated patients could be demonstrated. The results of the cultures showed that 45% of the toothbrushes were colonized with bacteria, and 30% tested positive for one or more multi-drug-resistant organisms. A basic oral care practice assessment of 112 patient-occupied rooms showed that 49% of patients did not have a toothbrush in the room or had a toothbrush but had not used it since admission.

The project site was a Midwestern facility with a primary service area of a bi-state region that has a population of 320,345. The percentage of persons 65 and older is projected to increase 12% from 2017 to 2022. The facility has 680 acute care beds, employs over 1,500 nursing staff, and is a highly regulated environment governed by federal, state, and local agencies. Key regulators include the Centers for Medicare and

Medicaid Services, the state Department of Health, the Occupational Safety and Health Administration, the Centers for Disease Control and Prevention, and The Joint Commission. NV-HAP is one of the most common HAIs in the United States, and patients with an HAI are at a higher risk for readmission within 30 days than patients without an HAI (Quinn & Baker, 2013). According to the Centers for Medicare and Medicaid Services Hospital Readmissions Reduction Program, a medical facility can be financially penalized if they have higher than expected 30-day readmission rates for pneumonia (McIlvennan, Eapen, & Allen, 2015). The Midwestern project site facility conducted an International Classification of Diseases, Tenth Revision (ICD-10) assessment of patients coded with NV-HAP in 2018 and found that there were 170 patients coded with NV-HAP, which led to an increase in the average length of stay from 4.6 days to 9.5 days. The mission and strategic vision of the facility is to provide compassionate and quality health services to all those in need. By providing nursing staff with knowledge regarding the importance of oral care and the assessment skills needed to provide oral care, the project site facility is affirming its mission and strategic vision.

Role of the DNP Student

I functioned as the leader of this project as well as a master's-prepared nurse. This project was of particular interest to me because I consistently witnessed how oral care was seen as a low priority among nursing staff when I served as a clinical nursing instructor. When I began my nursing career, I started in the oncology unit where oral care is a primary concern and needs to be diligently assessed due to the adverse effects of radiation and chemotherapy. Educating my patients and having them demonstrate the

importance of oral care during their admission is one of the reasons I pursued a staff education program for this project. I have seen the positive effects of oral care education for my patients. Some nurses may not feel comfortable admitting they were uncertain about providing adequate oral care or why this skill needs to be a top priority in the care of their patients. These uncertainties about oral care knowledge were the motivation I needed to follow through with the project. Nurses want to know why skills are needed and what the evidence shows to make these skills a top priority.

Role of the Project Team

The nursing professional development specialist was an essential member of the team with her knowledge of the facility's current oral care education. The project facility's infection prevention specialists assisted with the background data on oral care and current facility standards of care. During the staff education program, the team assisted in the development of the plan of delivery to current staff nurses so that they can use the material for their future staff educational courses. The initial draft of the education based on the literature was presented to the team during the first meeting, and their feedback was used to revise the staff education program. After the incorporation of the team's feedback, the staff education was given a final presentation during the team's second meeting. The expert reviewing and approving the content was the nursing professional development specialist who would deliver the approved education to the staff nurses and evaluate their learning after the completion of the staff education project.

Summary

According to Costello and Coyne (2008), nurses recognize the importance of oral care but lack adequate knowledge and the practice of oral care. In this section, I discussed the theory used in the project, the relevance to nursing practice, the local background, and the role of the project team. The next section includes an analysis of evidence regarding the gap in nursing practice.

Section 3: Collection and Analysis of Evidence

The problem was that nursing staff do not know the importance and benefits of oral care with nonventilated patients. The purpose of the project was to develop an evidence-based staff education program regarding oral care of the nonventilated patient. The previous section addressed Knowles's adult learning theory and its use in the project along with the project's relevance to nursing practice and the role of the project team. In Section 3 I describe the sources of evidence for the project, including published outcomes, archival data, evidence generated for the doctoral project, and the analysis and synthesis used to address the practice-focused question.

Practice-Focused Question

The nurses at the facility discovered that their colleagues were not providing oral care to their nonventilated patients at regular intervals. When nurses were questioned about their practice, they demonstrated a lack of knowledge regarding the importance and benefits of oral care. The gap in practice was that nurses at the project site were not providing oral care regularly and did not understand the importance and benefits of oral care. The practice-focused question addressed whether an evidence-based education program for nursing regarding oral care for nonventilated patients could be developed and validated. The purpose of the project was to develop a staff education program regarding oral care of the nonventilated patient. The project purpose aligned with the practice-focused question by addressing effective evidence-based education for oral care of the nonventilated patient.

Sources of Evidence

During the collection of evidence, I used an array of references to address my practice-focused question. These sources included publications from a professional organization, journals, and personal interviews. The professional organization I used was the American Nurses Association, and the journals are listed in the reference area. The collection and analysis of evaluation data from the team members provided the evidence on the effectiveness of the staff education program planning.

As the project leader, I used evidence-based practice literature to develop the initial draft of the staff education program and then presented the initial draft to the project team for their discussion and input. After incorporating the group's input, I revised and represented the draft to the project team. The project team assisted in the development of the final education program, plan for delivery, and evaluation plan for current nursing staff. The evaluation data were collected with the use of the Stakeholder/Team Member Project Evaluation and Expert Panel Evaluation of Staff Education forms (see Appendix A) to analyze the satisfaction of the planning process and the leadership throughout the education planning process and the overall satisfaction of the presented education.

The ethical considerations for the project were followed under the approval and authority of the facility. The team members were recruited by asking for volunteers from multiple disciplines within the facility. Before the collection of data, Walden University's institutional review board approved the project planning with Reference Number 05-24-19-0341476. The institutional review board at the project site approved of the project

before data collection with Reference Number 1435162-1. The project team members were given the Consent Form for Anonymous Questionnaires before the collection of evaluation data along with the use of de-identified evaluations to protect team members' identities.

Analysis and Synthesis

The Stakeholder/Team Member Evaluation of the Project and the Expert Panel Evaluation of Staff Education forms were provided to the team members at the end of the staff education planning process. The evaluation forms included 5-point Likert scale items to record, track, organize, and analyze the data regarding the team member's satisfaction with the planning process, leadership, and overall satisfaction with the staff education presented by the team leader. The forms allowed for the collection of the team members data to be carried out anonymously. The results of the team member evaluation were used to address the practice-focused question by demonstrating the appropriate oral care staff education planning program for the current nursing staff.

Summary

Section 3 addressed the sources of evidence, data collection, and analysis of data to answer the practice-focused question. The analysis and synthesis of data gathered with the use of the Stakeholder/Team Member Evaluation of the Project and the Expert Panel Evaluation of Staff Education forms demonstrated the positive planning process that would be used to deliver the education program to the project site after completion.

Section 4: Findings and Recommendations

The local problem for the project facility was the lack of a standardized oral care staff education program for the nonventilated patient population. A knowledge gap was identified by the nursing staff at the project site regarding the importance of oral care and the relationship between lack of oral care and NV-HAP. The practice-focused question for the project addressed whether an evidence-based education program for nurses regarding oral care for nonventilated patients could be developed and validated. The purpose of the project was to develop a staff education program regarding oral care of the nonventilated patient population.

Findings and Implications

The staff education planning process was initiated with a thorough evidence-based practice literature review. After the literature review was complete, a staff education PowerPoint and oral care algorithm (see Appendix C) were developed and presented to the team members at the initial meeting. The project team discussed revisions to the PowerPoint by adding an update slide on oral care interventions that the project facility had started to implement. The oral care algorithm revisions included changes to the coloring of the dependent oral care section and adding additional information about denture care. At the second and final meeting with the project team, the staff education PowerPoint and oral care algorithm were presented after the revisions for final approval and evaluation were completed. The Stakeholder/Team Member Evaluation of the Project (see Appendix A) was the first evaluation form completed by the project team members to evaluate the planning process of the project and the

leadership of the team leader throughout the project process. Four team members completed the evaluation survey, and 100% agreed or strongly agreed that the program goals were appropriate, the program outcome was met, and leadership was demonstrated throughout the project process. The project team also filled out Question 11, commenting on areas where they thought the leader excelled or might learn from their advice/suggestions. These comments included, “Very organized,” “Evidence-based research was used to develop the project,” “Once she started, we noted what a huge educational gap as at the facility,” and “Excelled with research and EBP reviews, analyzing data and communicating to staff needs through education.”

The Expert Panel Evaluation of Staff Education (see Appendix B) was the second evaluation form completed by the project team members to evaluate the planned staff education that was presented and would be delivered to the project facility at the completion of the project. The four project team members agreed or strongly agreed that the planned staff education met the project outcome. Comments included, “Took this project from nothing and really created something really wonderful for patients,” “Will be exciting to see results as we continue to strive to improve oral care,” and “Very well organized.”

Throughout the education planning process, the project facility was proceeding through the steps to improve their oral care tools according to evidence-based recommendations such as a soft-bristled toothbrush, baking-soda-based toothpaste, and alcohol-free antiseptic oral rinse (see Baker & Quinn, 2018). The project facility had been affected by hospital-wide budget decreases, and potential new products were

removed from the purchasing agenda at this time. This was substantial to the educational component of the project because the project was based on the evidence-based research and required supplies needed to implement the staff education program. The budget decrease was an unanticipated consequence that affected the size of the project team through removal of a team member in the beginning stages of the project due to the elimination of the team member's job position.

The staff's implications from the results of the project include improved oral care education for nonventilated patients, increased knowledge of high-risk consequences of poor oral care, and improved confidence in performing oral care. The patients' implications from the results of the project include reduced length of stay, improved quality of life, and increased knowledge of the benefits of oral care. Institutional implications from the results of the project include improved reimbursement and decreased patient length of stay.

In 2008, Medicare payment policy and the National Healthcare Safety Network reduced reimbursement to institutions for HAIs by mandating a pay-for-performance program (Quinn & Baker, 2015). A pay-for-performance program can impose financial penalties on an institution that fails to achieve specified goals, and the program will not reimburse hospitals for preventable conditions during patients' hospital stay. An important indicator of the efficiency of hospital management is length of stay. Decreased length of stay results in decreased risk of infection, improvement in the quality of treatment, and increased hospital profit with more efficient bed management (Baek et al., 2018). Findings from the study may be used to increase patients' quality of life, decrease

patients' risk of NV-HAP during hospitalization, and increase patients' discharge to their prior living situation.

Recommendations

The gap in nursing knowledge regarding the importance of oral care and the relationship between oral care and NV-HAP may be closed with the implementation of the staff education program and oral care algorithm (Appendix C). The staff education PowerPoint addresses the importance of oral care in the nonventilated patient, the knowledge gap in nursing and oral care practices, and the evidence-based tools needed to perform adequate oral care. The evidence-based oral care algorithm was designed to assist nursing staff in determining the level of oral care needed for the independent (able to expectorate) patient and the dependent (unable to expectorate) patient. Following the oral care algorithm may reduce NV-HAP incidence, hospital costs, patient length of stay, and patient mortality rates.

The planned staff education program will be delivered to the nursing professional development specialist to be included in the staff education competency program and a trial implementation of the cardiac step-down unit before being implemented throughout the remaining hospital units. The staff education program will be provided to all new nursing staff during their orientation process, and current employees will have the program added to their annual competencies. A pre and post learning survey will be completed by the nursing professional development specialist to collect data on improved knowledge of oral care throughout the education program. The long-term evaluation plan includes acquiring oral care kits that contain evidence-based tools to monitor the

compliance of the provision of oral care on all hospital units and track the ICD-10 codes for NV-HAP.

Contribution of the Doctoral Project Team

The project team was exceptional throughout the planning process, and each member was essential in providing oral care knowledge and passion for staff education. The nursing professional development specialist is the leader of staff education and orientation at the project facility and was able to network with interdisciplinary staff throughout the project to make them aware of the need for an oral care program. Her knowledge of the standards and policies of the project site was needed during the process to ensure the education was planned according to facility standards. The role of the nurse educator on the project team was to assess for complexity and suitability for the nursing staff. The nurse educator's role at the project site includes teaching staff competencies and ensuring the staff are competent when independently caring for patients. The third and fourth members of the project team were infection prevention specialists, and one is the leader of the Infection Prevention Department. These two members were experts in the facility's standards of infection control and were able to provide knowledge regarding the negative outcomes resulting from lack of oral care.

Strengths and Limitations of the Project

From the start of the project process, there was a positive response by nursing staff regarding the need for an oral care educational program, and the interdisciplinary team that was formed for the project was enthusiastic about gaining knowledge of improved oral care. This strengthened the project by allowing for a smooth education

program to be planned, and all team members were invested in the planning process and the improvement of the oral care products supplied at the facility. The second strength of the project was the extensive literature that was available for review to develop the staff education program. The evidence-based literature was essential in the planning process so that the nursing education program would be current and include approved practices.

The limitation of my project was the size of the project team, which consisted of four members, excluding the team leader. The project team was diverse with each member from a different discipline, but an increase in the size of the project team could have led to additional recommendations for the oral care program. My recommendation for future projects is to start the search for interested project team members at the planning stage of the proposed project so that there will be enough interested and invested team members to provide adequate knowledge for the project.

Section 5: Dissemination Plan

The standardized staff education program will be appropriate for dissemination to all health care staff who would have direct patient care. This project was presented to the Nursing Partnership Council to raise awareness of the need for improved oral care and the evidence-based tools that are needed to carry out the program with positive outcomes. Raising awareness of the current situation regarding the lack of oral care consistency in the nonventilated patient population has initiated a positive nursing response and increased the number of nurses asking to join the oral care protocol team. Presenting this project to nursing management, nursing finances, and the hospital purchasing department has demonstrated the positive outcomes for the institution by decreasing facility costs, patient length of stay, and HAIs. The dissemination of this project at a local nursing conference will demonstrate the scholarly work and experiences performed to enhance practice and health care outcomes.

Analysis of Self

When I started my doctoral journey, I was unsure of my path as a practitioner and scholar. Throughout my practicum experiences, I was able to understand the need for evidence-based practice in the nursing field and health care as a whole. As the leader of my project, I was able to increase my knowledge of not only the steps needed for an evidence-based practice project but also the leadership style and patience needed to make it successful. When I began the doctoral program, my goal was to use my knowledge to teach in the academic setting and educate future nurses on the evidence-based practice journey. This goal has been reached in that I have accepted a nursing faculty position at

the university where I was an adjunct. I am excited to demonstrate the skills that I have gained along my doctoral journey and to show my students the possibilities that can be reached by knowing that there is always more to learn.

The completion of my doctoral project included many challenges along the way, such as multiple revisions during each stage of the project, as well as coordinating multidisciplinary team member schedules to present and review the planned staff education program. These challenges have assisted me in planning for the challenges in future projects and to not become discouraged because they have helped strengthen my knowledge of the scholarly journey and my leadership skills for future endeavors.

Summary

Nurses are the frontline staff who can prevent NV-HAP and improve patient outcomes. Nursing staff need to have access to and utilize an evidence-based education program that demonstrates the importance of oral care in the nonventilated patient population. This standardized staff education oral care program is the first step in closing the knowledge gap by creating an education program that can increase staff knowledge regarding the importance and benefits of oral care.

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Appendix A: Stakeholder/Team Member Evaluation of DNP Project

Problem

Purpose

Goal:

Objective:

Scale: SD=Strongly Disagree D=Disagree U=Uncertain A=Agree SA=Strongly Agree

1=SD 2=D 3=U. 4=A SA=5

Q1 Was the problem made clear to you in the beginning?

Q2 Did the DNP student analyze and synthesize the evidence-based literature for the team?

Q3 Was the stated program goal appropriate?

Q4 Was the stated project objective met?

Q5 How would you rate the DNP student's leadership throughout the process?

Q6 Were meeting agendas sent out in a timely manner?

Q7 Were meeting minutes submitted in a timely manner?

Q8 Were meeting held to the allotted time frame?

Q9 Would you consider the meetings productive?

Q10 Do you feel that you had input into the process?

Q11 Please comment on areas where you feel the DNP student excelled and might learn from your advice/suggestions:

Appendix B: Expert Panel Evaluation of Staff Education

Scale: SD=Strongly Disagree D=Disagree U=Uncertain A=Agree SA=Strongly

Agree

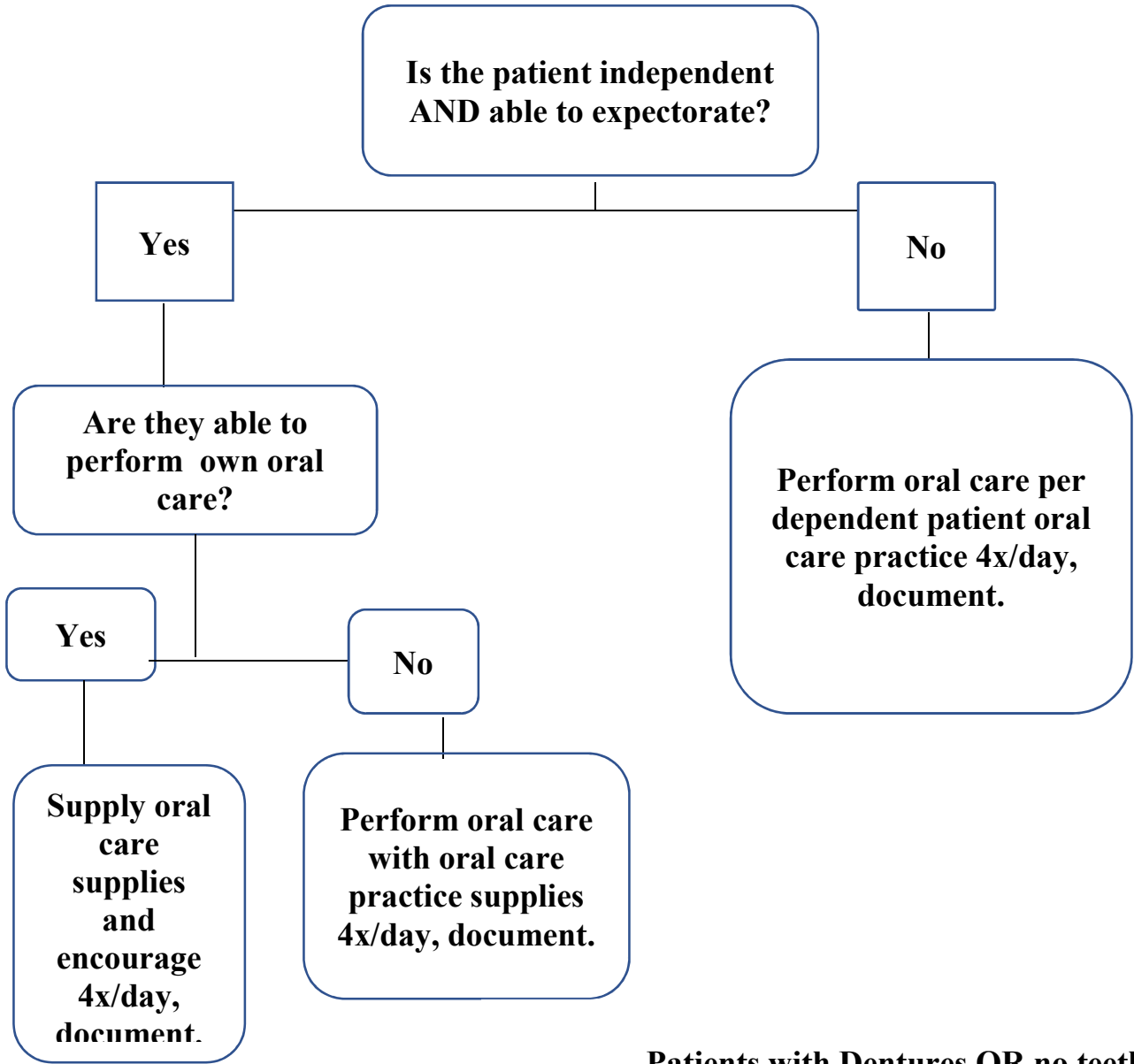
	1=SD	2=D	3=UC	4=A	SA=5
The education is clear and easy to follow.					
The education is relevant to clinical nursing practice.					
The education content is consistent and appropriate to current nursing practice standards.					
Nurses will be able to complete the education.					
The education will increase nurses' knowledge.					
The education will help to identify areas where nurses have gaps in knowledge and need remediation.					
The length of time to complete the education is appropriate.					
Overall I am satisfied with the content and quality of the education.					

Comments:

Thank you for your participation.

Appendix C: Oral Care Algorithm

**Nursing
Non-Ventilated Oral Care Practice**



Patients with Dentures OR no teeth:
Brush oral cavity with toothbrush or swab
Swish/Spit oral rinse
Clean dentures (do not clean with toothpaste, may scratch dentures)
Perform 4x/day
At bedtime remove dentures – place only in denture container/soak with denture cleaner and water