

Capstone Paper: Oral Care

Juliette Canzona

Susan L. Davis & Richard J. Henley College of Nursing, Sacred Heart University

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Professor Arsan-Siemasko

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Background/Significance of Project

Oral care is a fundamental intervention led by nurses which provides patient comfort and prevents adverse outcomes in critically ill patient's. Evidence shows that the neglect of oral care places a patient at a higher risk for HAI's, mortality, longer hospital stays, increased duration of mechanical ventilation and increased cost in their care (Lombardo, 2022). Many barriers to implementing frequently performed oral care have been established through research and studies. These barriers include time restraints due to understaffing and high workloads, competing clinical priorities, lack of knowledge, unaware of guidelines/protocol, and nurse's own biases/perception of oral care. The goal of the project was to encourage the intended audience, registered nurses on unit 9N to prioritize performing individualized oral care on all patient's. This clinical problem is important specifically to this setting on unit 9N because many patients have endotracheal tubes, tracheostomies, or are on a ventilator. When focusing on the audits of oral care documentation, oral care was not being documented as often as it is supposed to be. Oral care has also not been getting done as frequently and thoroughly as it is supposed to be mainly due to high workload and time restraints on the unit. Therefore, the project addresses ways to work time efficiently in order to fit oral care within your plan of care. Aspiration of oral colonization has been identified as one of the most common causes of VAP, as a result of poor oral care (Gupta, 2016). Therefore, proper and frequent oral care is essential on this unit where many patients have endotracheal tubes in place that ultimately, places them at a higher risk for infection and aspiration. On unit 9N patients who are ventilated should be getting oral care done around every 2 hours and nurses were not meeting this intended goal.

Role and Responsibility of the Professional Nurse

Nursing Role Related to Topic

The professional nursing role is related to the implementation of oral care to patient's b/c oftentimes patient's are dependent for self care needs therefore, needing the nurses to perform the care for them. In intensive care unit settings patient's most times are dependent on nurses for their oral care needs owing to either physical incapacity or limited function (Lombardo, 2022). When patient's are independent it is the nurses role to educate them on the importance of oral care and how to properly perform their own oral care. In a survey of registered nurses working across 102 ICUs in the USA, respondents expressed the task of oral care as unpleasant and difficult (Lombardo, 2022). Oral care is often overlooked and not prioritized in daily activity plan of nurses and when oral care is performed it's done in a substandard way by swabbing the mouth with gauze and normal saline solely for comfort measure. The nurses role is to prioritize clinical tasks that will help improve patient's condition and avoid any adverse outcomes. Therefore, it is critical to change nurses from viewing oral care solely as a comfort measure; to oral care as an obligation. Nurses viewing oral care as an obligation and priority clinical task will help to improve nursing practice, create positive social change by improving the quality of care provided to patients, and improve patient outcomes by providing comfort and decreasing the risk of aspiration (Dagnew, 2020). Intubated patients with mechanical ventilators need specific oral care due to their condition. Therefore, it is the role of the nurse to take careful consideration of the technique, equipment, solution and frequency of oral care for these high risk patients (Khasanah et al, 2019). The role of the nurse as well, includes following evidence based information and standard protocol to guide their care.

Legal & Ethical Considerations

Negligence is the absence of performing standard of care that leads to an adverse event. Oral health is often neglected, especially in the elderly, partly because they need to care on many

levels; as a result, less time is reserved for oral health care (Tabatabaei, 2020). By neglecting the implementation of oral care for reasons such as time restraints or competing clinical priorities, these adverse events could include HAI's, longer hospital stays, and a decline in the patient's condition. Nurse's may presuppose a patient's ability to perform their own oral care, and therefore may not offer oral care, offer to set up supplies, or even check to ensure oral care was completed satisfactorily. It is the role of the nurse ethically, to maintain a patient's dignity when not able to care for themselves, therefore it is important for the nurses to assess a patient's ability to provide their own oral care and if not capable, assist them in doing so. If patient's develop infections such as ventilator associated pneumonia while in the hospital, legally, the hospital as well as the healthcare providers are considered liable for the health of the patient (Treglia et al, 2022). As well, due to lack of documentation on oral care on the unit, if an infection is developed, legally there is no proof that the necessary measures to prevent that infection were taken.

Patient Advocacy

The project was designed as an informational pamphlet as a tool to foster patient advocacy. The design of this project illustrates that every patient has the right to safe and quality oral care. Every patient regardless of their risk for potential infection should be provided with oral care. It is essential that every patient receives care and interventions that's intent and goal is to improve their health and decrease their length of stay in the hospital. Through the use of this pamphlet to educate the nurses on ways to manage their time and to prioritize oral care we are fostering patient advocacy. This tool helps advocate for patients who may have suffered from conditions such as a stroke, joint pain, or muscle weakness that affects their ability to provide their own oral care.

Examines the Impact on Finance

The effects of improper oral care, or not performing oral care regularly include financial burdens for the hospital. Globally, the prevention of a single index case of VAP is estimated to save up to US \$163,000 (Lombardo, 2022). Ventilator associated pneumonia is associated with longer hospital stays and higher hospital costs finances. If patient's develop a hospital acquired infection due to improper oral care, that can lead to the need for antibiotics, increased length on ventilators, and any other treatments necessary will cost the hospital a vast amount of money. "As reported by the American Thoracic Society and the Infectious Diseases Society of America, treatment of HAP costs approximately \$40,000 per patient" (Talley, 2016). Recent studies show 55% of HAIs are preventable therefore, it is essential to perform oral care and assessments thoroughly which will ultimately save hospitals from these high costs. It is also important for hospitals to utilize their finances as well to ensure that each unit has an adequate amount of oral care supplies/ kits. This will allow for the nurses to be able to provide the best oral care for their patients.

Examines Impact on Regulatory Environment

Many governing bodies oversee the importance of oral care within the hospital setting. "A recent article in the journal *Infection Control & Hospital Epidemiology* (ICHE) detailed a call to action from national organizations, including The Joint Commission, to address NVHAP" (*The Joint Commission*). This call to action included launching a national healthcare conversation about NVHAP and encouraged researchers to develop new ways to implement surveillance and prevention. The issue of Quick Safety challenges hospitals to support prevention and add these prevention measures to education for patients and healthcare providers. Specific to unit 9N, the clinical nurse manager oversees oral care competency on the unit. She

supervises and assesses whether the nurses on the unit are implementing oral care as well as documenting the completion of oral care in EPIC. When the clinical nurse manager assessed that oral care was not being performed as frequently as it is supposed to and wasn't being documented each time, she held a nurse huddle to inform the nurses on the importance of performing and documenting oral care. Therefore, the clinical nurse manager played a huge role on their unit to a regulatory environment for oral care.

Developmental, Age Appropriate, and Culturally Sensitive and Diversity Considerations

Recipients of Intervention

Those that will be recipients of this intervention would include every single patient on the unit. Every patient on the unit should be receiving proper and extensive oral care. Within unit 9N there are a wide variety of patients with specific needs. Patients receiving this intervention are those that are independent and may need assistance, reassurance, guidance, or education. Patient's that are dependent and require full care provided by the nurse will be a recipient of the intervention, as well as high risk patients that may be intubated, on a ventilator, on biPAP, need frequent suctioning, etc. Low risk patients are also recipients for this intervention to keep them healthy and prevent any adverse events during their hospital stay. Oral care is a universal intervention that should be implemented for all patient's.

Developmental, Age Appropriate, Cultural Competency Principles

The project is age and developmentally appropriate for our intended audience. Many nurses on unit 9N of St. Vincent's Hospital are experienced nurses with advanced levels of knowledge, education, and critical thinking skills. Therefore, the project is developmentally appropriate in the sense that it does not address basic knowledge and education on oral care. However, it uses critical thinking and uses higher level research and studies to educate nurses on

proven effective interventions. The project focuses upon statistically proven outcomes related to the interventions we discussed and recommended. For instance, we educated the nurses upon the implementation of an oral care program where the number of cases of non-ventilated HAP was reduced by 37% during a 12-month intervention period of an oral care program based on patient's risk assessments/scores (Talley, 2016). In different cultures, nurses have different understandings and views on dignified care. In a U.K study of how dignified care is understood and delivered by healthcare professionals, researchers found differences in the way staff perceived dignified care. Nurses conceptualized dignity as an emphasis on respect, individuality, patient involvement, in decision- making, and privacy (Coker, 2020). Therefore, nurses explained that patient's who appeared to be able to manage their own care were not prompted or questioned about having completed oral care due to it being perceived as intrusive. Some nurses reported that they left it up to the patient's to ask for help if they needed it to preserve autonomy. It seemed as though for these nurses, the goal of honoring dignity was more important than adequate oral hygiene outcomes. Therefore, through acknowledging different cultural beliefs and values of the intended audience, it was essential for this project to be clear on the importance of assessing a patient's ability to perform their own oral care and the need for any assistance.

Age Appropriate Learning Styles

Depending on age and generation every nurse has different styles of learning. A study that used Rogers' Diffusion of Innovation Theory to guide the implementation of an oral care nursing guideline in intubated patients has shown how to address these different learning styles. This implementation utilized many aspects of the Rogers' Diffusion of Innovation Theory which included a workshop, booklets, printed presentation slides, demonstrations, and private coaching (Khasanah et al, 2019). All participants of the study were required to attend an oral care

workshop where a presentation was delivered about the definition of oral care, its purposes, complications of irregular oral care, the importance of oral care in intubated patients, and techniques. Booklets were printed for the nurses that contained an image-guided oral assessment tool for easy implementation. This way, nurses who are visual learners can be educated in the most effective way. Coaching sessions allow for those who are hands-on learners to practice oral assessments and oral care step by step with supervision. Therefore, by enforcing many different learning styles we can ensure that every nurse will understand and be educated upon proper oral care.

Diversity, Equity, and Inclusion

In many ways this project demonstrates diversity, equity, and inclusion. Many patient's have dentures or no teeth. It is essential for nurses to be knowledgeable on denture care and the importance of oral care even when a patient has no teeth. On unit 9N some patients on ventilators may have no teeth however, it is still essential to perform chlorhexidine swabs of the mouth as they still have the same risks for VAP and other complications. Low income patient's once they are discharged may not have access to oral care and the proper materials. Therefore, it is important for nurses to take this into consideration and if needed supply the patients with what they may need outside of the hospital. Those who bear the greatest burden of disease are vulnerable populations (ie, low-income individuals, ethnic minorities, immigrants, and individuals with disabilities) who may have low oral health literacy and limited access to care (Laniado et al, 2021). Therefore, it is important to be aware of these differences and characteristics of patient's to understand their vulnerability to oral health and be able to prevent future adverse outcomes. All patients despite what their presenting illness is and why they are in the hospital should all be provided with oral care throughout their stay.

Patient Centered Care Principles

The project instrument was created in relation to patient-centered care as it focuses upon how to provide individualized patient specific care. It discusses how every patient has different oral care needs based on their oral assessments. Many families may feel more comfortable than others participating in the care of their patient, therefore it is necessary for the nurse to assess their willingness to participate. Families may want to perform the oral care for their loved one, it is essential for nurses to listen to their preferences and guide them through giving the proper education to perform the oral care. When providing patient and family centered care it is essential to communicate and share all information on the care you are providing with the families. It may be helpful to educate the families and the patient on how the implementation of proper oral care will help in preventing adverse outcomes such as respiratory infections and aspiration. The project was designed to impact the patient and family in the healthcare process by addressing how the nurses role in oral care has the ability to decrease the patient's length of stay in the hospital as well as improve their health condition/ status. Within a study of older hospitalized patients, when reflecting upon their prior hospital experience three recurring ideas were revealed. Oral hygiene routines sustain a sense of self worth, daily oral hygiene is perceived not worth the effort by some, and structural barriers, *i.e.*, *"I'd like to, but I can't"* (Coker, 2020). Patient's wanted to adhere to their usual oral hygiene routines, however, were unable to when they felt weak. Patient centered care is valuable to provide as we want to maintain these patient's self worth or encourage the importance of oral care when others feel as though it is not worth the effort. Nurses also need to establish when a patient feels too weak to perform their self-care needs. Patient-centered care is all about assessment and understanding what that specific patient's needs are, which is the nurse's role.

Professional Nursing Care Competencies

Teamwork & Collaboration

Teamwork and Collaboration are essential to providing quality and safe care to patients within the hospital setting. Teamwork and collaboration is not only essential between nurses but with other healthcare specialties as well. It is important for nurses to collaborate with other members of the healthcare team such as respiratory therapists, occupational therapists, physical therapists, speech language pathologists etc. Oral care is an overlooked task that is actually very complex and includes teamwork to improve patient outcomes. Oral care includes performing dysphagia screening in high risk patients and developing and indicating the need for modified diets and feeding strategies for patients with difficulty swallowing. These tasks are essential to prevent aspiration of bacteria that can cause aspiration pneumonia and other conditions. Therefore, collaborating with speech language pathologists are essential with oral care interventions. Collaborating with respiratory therapists are important especially on a unit like 9N. Respiratory therapists are constantly at the bedside of patients on ventilators, therefore it is essential for the respiratory therapists and nurses to work as a team and communicate their oral assessments and any interventions they've performed such as suctioning. Lastly, teamwork and collaboration is important to utilize when the hospital is understaffed and nurses have high workloads. Nurses should either delegate oral care to another team member, or delegate other tasks to LPN's in order to make time to perform oral care. Delegation is an important aspect of nursing to ensure that all tasks are getting completed safely and thoroughly.

Quality Improvement

The U. S. The Department of Health and Human Services defines quality improvement as "...systematic and continuous actions that lead to measurable improvement in health care services and the health status of targeted patient groups" (Kelly, 2022). Through providing

proper oral care to patient's nurses are able to lead to measurable improvement in the health and outcomes for patients in the hospital. Through having specific guidelines and protocols for oral care, nurses are knowledgeable upon and aware that patients can receive individualized oral care for their specific needs. Through basic interventions such as intermittent suctioning, cleaning of the oral cavity, and keeping the HOB at least 30 degrees we can improve the quality of patient's health and care by preventing worsening of their condition (Gupta et al, 2016). Quality improvement has been proven to lead to a decrease in healthcare associated infections related to oral care, specifically ventilator associated pneumonia and aspiration pneumonia. In order to establish quality improvement of oral care, all members of the healthcare team must be supplied with the proper materials to use on patient's as well as being provided with specific guidelines and policies. The implementation of oral care based on individualized oral assessment and established needs, will continue to have improved health and decreased length of stay in the hospitals for patient's.

Patient Safety

Oral care maintains a crucial role in protecting patient's safety. Especially when patient's have an endotracheal tube in place their normal defense mechanisms are disrupted putting them at risk for impaired safety. An endotracheal tube disrupts normal mucous clearance, which causes a collection of secretions above the cuff, which contaminates the subglottic pool. Therefore, intermittent and frequent suctioning can help maintain patient safety by avoiding contaminated secretions from draining into the trachea and being aspirated into the lungs. With a lack of effective oral care, dental plaque deposits develop on the teeth within 72 hours which can act as reservoirs for potential respiratory pathogens (Gupta et al, 2016). The nurses performing frequent oral care will ultimately maintain the patient's safety from respiratory infections and

aspiration. Aspiration of oral colonization has been identified as one of the most common causes of ventilator associated pneumonia, as a direct result of poor oral care. Studies have proven a direct correlation between poor oral care and aspiration of oral colonization therefore, these unsafe outcomes can be avoided through the integrating oral care into the nurses plan of care. Nursing assessments are also vital in promoting patient safety. Nurses should be performing an initial assessment of the oral cavity upon admission as well as daily assessments to allow for early identification of any oral hygiene issues and for continuous observation of oral health.

Interdisciplinary Perspectives

There is growing research and evidence that oral health is a critical component of overall health and that poor oral health may lead to other negative health outcomes including the exacerbation of chronic inflammatory diseases and conditions such as diabetes, cardiovascular disease and pulmonary disease. Oral diseases and disorders present a systemic burden and that healthcare providers should be “ ready, willing, and able to work in collaboration to provide optimal health care for their patient’s” (Laniado et al, 2021). For hospitals that serve a vulnerable patient population with multiple chronic conditions including diabetes mellitus, obesity, cardiovascular disease, and HIV, such as in this study, collaboration of the medical healthcare team with oral healthcare team members has greater potential to address the impact of oral health on overall health. Therefore, because oral health has been researched to have an effect on systemic health, interprofessional collaboration is essential to provide holistic care of patient’s. Interprofessional collaboration aims to improve patient experience of care, improve health of populations, and reduce costs. Nurses should keep providers updated on changes to a patient's oral health as it can have an impact on the patient’s medical outcomes and can lead to many systemic effects.

Identifies Learning Needs & Improved Outcomes

The identified learning needs of the target audience includes interventions and strategies to time efficiently implement oral care in to their plan of care for the day with high workloads and time restraints. Another identified learning need of the target audience was understanding the importance of oral health assessments and basing patient's oral care needs on their individualized assessment. By instructing the nurses on ways to improve time management such as utilizing oral care kits and placing oral care materials in the patient's rooms to serve as a reminder while implementing other care, patient outcomes will drastically improve due to oral care being implemented more frequently. Immediately after the standardization of oral care equipment placement in patient rooms, Diaz et al. reported an increase of usage from 12.5% to 34.7%, of all available components in an oral care kit (Lombardo et al, 2022). We also educated the nurses on assessment tools such as the Modified Beck Oral Assessment Tool, to conduct initial and daily assessments to incorporate individualized oral care based on their risk scores. By addressing the identified learning need, patients will receive individualized, specific oral care that will improve outcomes. Oral care needs vary whether patient's have dentures, endotracheal tubes, are on ventilators, have absence of teeth, etc. Therefore, by educating nurses to base their oral care on their assessments of patient's they can effectively prevent any adverse outcomes in their health.

Impact on Patient Safety

The project addresses patient safety in many different aspects. The project addresses the importance of elevating the head of the bed to at least 30 degrees to help prevent reflux and aspiration. The project also states the relevance of subglottic suctioning intermittently, or continuously depending upon secretion production (Gupta et al, 2016). Aspiration is a huge

safety risk therefore, it essential to implement interventions that are proven to effectively reduce the risk of aspiration. The project also acknowledges and educates on which patients are at highest risk for impaired health and safety. For example, ventilator associated pneumonia was a complication in 8% to 28% of patient's receiving mechanical ventilation. The dangerous effects of ventilator associated pneumonia has been increased by intubation since the primary defenses of the human body to dissipate aspirated microbes has been reduced by intubation (Khasanah et al, 2019). Therefore, teamwork and collaboration with other healthcare team members such as respiratory therapists can allow for frequent monitoring, assessment, and interventions for these higher risk patients in order to improve their safety. Microbes in the oral cavity, such as *A. baumannii*, cause VAP and can be controlled by regular oral care. Collaboration will allow for regular oral care to be implemented more frequently and ultimately will prevent microbes in the oral cavity from leading to respiratory infections.

Clinical Informatics

Clinical informatics has a huge impact on oral care in the hospital setting. The nurse manager established that oral care was not being documented as frequently as it should be within the EPIC system. Therefore, we educated and reminded the nurses on the importance of utilizing the oral care pop-ups in the "brain" of the EPIC system. When you click on these pop-ups within the "brain" it gives you the option to document if the care has been completed, giving nurses easy and quick access to documentation. It was also proven on the unit that oral care was not being performed at the times that it was supposed to. Within St. Vincent's EPIC system, on the "brain", there are oral care icons under each time that it is ordered to be performed, for instance if oral was to be implemented every 2 hours, the icon would be presented under two hour intervals. The main intervention discussed in our project was the use of the Modified Beck Oral

Assessment tool to conduct initial and daily assessments, to determine individualized oral care needs. One way in which clinical informatics can have an impact on our intervention is if EPIC provided nurses with direct access to this Modified Beck Oral Assessment Tool, in order for nurses to be educated on exactly what they are looking for and assessing during their oral care assessments. Through being able to see what is being assessed and their risk scores, nurses will be able to get a larger picture of what is going on with their patient and what their specific needs are.

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