

“ZAP VAP” Phase 2 Improving Compliance of Oral Care and the Effect on Ventilator Associated Pneumonia Rates

Margaret Henderson, BSN, RN, CCRN
Kathryn Hilbert, BSN, RN, CCRN
Erin Kaschalk, BSN, RN, CCRN
UPMC Hamot, Trauma Neuro Intensive Care Unit

Introduction

- Ventilator associated pneumonia (VAP) has the highest morbidity and mortality of all hospital-associated illnesses and may be to blame for up to 60% of all deaths from hospital-associated illnesses.
- VAP affects 28% of ventilated patients, increases the number of days in the intensive care unit by 4-6 days, increases patient costs by 20,000-40,000 dollars, and has a mortality rate of 33% (Larrow & Klich-Heartt, 2016).
- Consulting Lippincott Procedures guidelines for oral care, which provides the most up-to-date evidence-based practices for nursing policies and procedures, it was determined that oral care should be completed every two hours.

Background

- Identified high incidence of ventilator-associated pneumonia (VAP) within TNICU
- No oral care baseline data available for comparison
- Literature review completed to establish oral care guidelines
- Assessed current oral care kits stocked in hospital and determined that they did not have enough supplies for a 24-hour period to meet the evidence-based recommendations
- Cost Analysis performed to evaluate benefit of modifying existing kit versus purchasing a different product
- Worked with storeroom to develop kits to meet the need for guideline requirements
- PowerPoint presentation created to educate staff on guidelines for proper oral care
- Post test created to evaluate completed education

Methods

- Oral care kits stocked in unit and distributed to each room
- Each room had designated area to collect the oral care tabs based on 24-hour collection
- Staff reminded in daily huddle of ZAP VAP project and mandatory participation
- Audits done every 24 hours for each patient & evaluated
- Data collection was done over a 3-month period (8/2019-10/2019) tracking oral care compliance with monthly audits

Results

Prior to implementing this project, no baseline compliance data available to use for comparison. After education provided, the auditing process revealed that the TNICU oral care compliance for ventilated patients was **approximately 50%**.



Discussion

- During the months of data collection, the TNICU experienced higher levels of acuity and patient census. Use of agency & float pool staff was required to meet this demand. These nurses did not receive the VAP education and were less familiar with the project requirements (auditing practices, latest guidelines, etc.). These factors may have contributed to a decline in oral care compliance within the unit due to an increased staff workload.
- Staffing was in a transitional phase during the time of data collection. Eight new grad nurses were beginning their orientation. With the taxing orientation requirements, matched with the unusually high level of acuity, oral care may not have been completed because of focus on other aspects of care.

Conclusion

Oral care compliance for ventilated patients in the TNICU needs to remain a top area of focus in an effort decrease our VAP rates. This project provided a baseline compliance level and identified barriers in performing oral care. Moving forward the TNICU Leadership committee has agreed to:

- Provide further education and statistical data on the importance of oral care compliance in reducing VAP rates in our patient population.
- Increase accountability expectations among peers to assist TNICU in reaching our goals.
- Potentially re-launch the “ZAP VAP” audit to evaluate compliance rate after further education.

References

Larrow, V. & Klich-Heartt, E. (2016). Prevention of ventilator-associated pneumonia in the intensive care unit: beyond the basics. *Journal of Neuroscience Nursing*, 48(3), 160-165.

Lippincott Procedures (2020). Oral care. Retrieved from <https://procedures.lww.com/Inp/view.do?pld=544824&hits=cavity,care,mouth,oral,carefully&a=false&ad=false>