

INTRODUCTION

- Maintaining a healthy upper airway in an ICU patient can be problematic due to the presenting condition of the patient and the medical treatment provided.
- Since many ICU patients are immunocompromised, they have a predisposition to oral infections, such as candidiasis or herpes simplex,¹ and some medical conditions, e.g., chronic anaemia, diabetes, Crohn's disease, and leukaemia, have oral manifestations.
- Oral intubation leads to xerostomia, mucositis, and a shift in the bacterial flora from predominantly Gram-positive bacteria to Gram-negative bacteria.² The use of endotracheal tubes and tape, mouth props, and suctioning devices all increase the risk of oral trauma in ventilated patients. The endotracheal tube can obscure the view of the oral cavity and limit access for oral care.³

- Ventilator-associated pneumonia is a potentially preventable consequence of intubation and mechanical ventilation and is the most common nosocomial infection in mechanically ventilated patients.⁸ Critically ill patients who are intubated for more than 24 hours are at higher risk for VAP, and, therefore, mouth care and oral health should be an important part of nursing care. The current literature has identified problems with adequate oral care in intubated patients that include the definition and quantification of oral care.⁹ The Centers for Disease Control and Prevention guidelines maintain that the primary route of bacterial entry into the lungs is through the oropharynx during episodes of micro-aspiration.¹⁰
- Oral care is an intervention that can be performed by the nursing staff during their patient care routines to decrease VAP incidence rates and therefore should be incorporated into the plan of care for intubated patients.¹¹

METHODS & MATERIAL

This review considers the evidence supporting the use of oral care in ICU patients and makes recommendations for comprehensive care.

A thorough review was conducted utilizing search terms "oral care strategies" and "intensive care unit"

Common databases searched included Pubmed, Scopus and Ebsco

RESULTS

A total of 1384 manuscripts were obtained in the initial search. Inclusion and exclusion criteria were applied, and results were narrowed to 45 articles. Inclusion criteria included articles from 1990, studies in the English Language. Commentaries, letters to the editors and book chapters were excluded.

DISCUSSION

Although the intended outcome may be the same, individual nurses often have their approaches to providing patient care. The best interest of the patient is always the top priority; however, patient care routines may vary depending on the nurse's educational and career backgrounds and beliefs about nursing care. Therefore, specific oral care guidelines for VAP prevention for intubated patients in the ICU should be implemented for nurses. This would reduce misunderstandings about the expected oral care practices needed in these patients.

Garcia et al. found that by implementing a comprehensive oral-dental care protocol, the incidence of VAP may drastically decrease.¹³ Adult patients who had been intubated for more than 48 hours were studied at a large teaching hospital in the 10-bed medical intensive care unit over a 48-month period. Flow sheets were used to review nursing compliance with the established oral care protocol. The protocol consisted of specific interventions for nurses while caring for intubated patients, including daily oral assessment, deep suctioning, tooth brushing, and oral cleansing of the lips and tissues. This study reported a significant decrease in ventilator days resulting from increased nursing compliance to the comprehensive oral-dental care protocol. The results showed a VAP rate of 12 per 1000 ventilator days before the introduction of this protocol and a VAP rate 8 per 1000 ventilator days after the introduction of a comprehensive oral-dental care protocol. This study concluded that adding oral care protocols to VAP prevention guidelines can reduce VAP in the ICU.

In another study, nursing adherence to oral care guidelines was an essential factor in VAP prevention.¹⁴ This study focused on how putting institutional oral hygiene protocols into effect influences the oral care provided by nurses in the ICU. "Despite strong evidence in the literature on the role of oral care in prevention of VAP, nurses continue to view it as a comfort measure with low priority."¹² Providing nurses with more reliable information that demonstrates the effectiveness of oral care practices could reduce some of the reported reasons for noncompliance and increase the priority of oral care. If evidence-based practice is observed more frequently, there could be an increase in nursing adherence to oral care recommendations. The study determined that noncompliance to oral care guidelines decreases when there are set guidelines in place at hospitals.

Interventions that are proven beneficial by evidenced based practice must be understood by the nursing staff to increase compliance. When creating a VAP bundle intended to decrease incidences of VAP among ICU patients, Sedwick et al. discovered that application of oral chlorhexidine, an oral antiseptic, had a strong effect on reducing VAP rates, whereas the use of oral antibiotics did not have the same effect. This study also found that patients with more dental plaque were at higher risk for developing VAP.

DISCUSSION

Pearson and Hutton completed a controlled trial that compared the ability of foam swabs and toothbrushes to remove dental plaque and measured the differences.

Use good oral hygiene, including toothbrushing, with all patients.

Implement oral hygiene assessments and intervention strategies for all patients at risk for developing VAP. Recommendations include the following:

- Decontaminate devices that come into contact with the respiratory tract.
- Implement the hand hygiene guidelines released by the CDC in 2003.
- The guidelines include decontaminating hands by washing them with antimicrobial soap and water or by using an alcohol-based, waterless antiseptic agent if hands are not visibly contaminated. In addition, gloves should be worn when handling respiratory secretions or objects contaminated with the respiratory secretions of any patient.

CONCLUSION

Ventilator-associated pneumonia is a serious condition that increases mortality and morbidity, but it is also preventable. Critical care nurses are the direct caregivers for patients in the ICU, and it is important for nurses to be made aware of the benefits of complying with adequate oral care practices to decrease the incidence of VAP.

