



ORAL CARE IN THE CRITICALLY ILL

Expected Practice:

- Develop and implement a comprehensive oral hygiene program for patients in critical care and acute care settings who are at high risk for healthcare-associated pneumonia.
 - Brush teeth, gums and tongue at least twice a day using a soft pediatric or adult toothbrush.
 - In addition to brushing, provide oral moisturizing to oral mucosa and lips every 2 to 4 hours.
 - Use an oral chlorhexidine gluconate (0.12%) rinse twice a day during the perioperative period for adult patients who undergo cardiac surgery. Routine use in other populations is not recommended at this time.

Supporting Evidence:

- Colonization of the oropharynx is a critical factor in the development of nosocomial pneumonia.¹⁻³ Growth of potentially pathogenic bacteria in dental plaque provides a nidus of infection for microorganisms that have been shown to be responsible for the development of ventilator-associated pneumonia (VAP).²⁻⁴ Dental plaques provides a microhabitat for organisms and provides opportunity for adherence either to the tooth surface or to other microorganisms. These microorganisms in the mouth translocated and colonize the lung, which can result in VAP.^{3,5} Dental plaque can be removed by brushing. (Level VI)
 - Whereas there are no data associated with critically ill patients, the American Dental Association recommends that healthy people brush teeth twice daily to remove plaque from all tooth surfaces.⁶ (Level II)
 - The use of an oral care protocol (brushing with a pediatric toothbrush, mouthwash, and moisturizing gel) reduced oral inflammation and improved oral health.⁷ (Level IV)
- Chlorhexidine oral rinse reduced respiratory infections in cardiac surgery patients who received chlorhexidine before intubation as well as postoperatively⁸ and reduced nosocomial pneumonia in patients who were Intubated for more than 24 hours.⁹ However, when chlorhexidine was tested in a more varied ICU population, no difference was observed in VAP, mortality, or length of stay. Although oropharyngeal colonization by VAP pathogens was reduced with chlorhexidine, its efficacy was insufficient to reduce the incidence of respiratory infections.¹⁰ A recent meta-analysis of chlorhexidine trials found that use of chlorhexidine did not result in significant reduction in the incidence of nosocomial pneumonia, nor in alteration of the mortality rate.¹¹ The CDC [Center for Disease Control and Prevention] guidelines recommend use of chlorhexidine only during the perioperative period for adult patients undergoing cardiac surgery; routine use in other critically ill populations is not recommended.¹² (Level V)
- Several studies have tested intervention bundles that included oral care as one of the interventions.¹³⁻¹⁴ Whereas these studies demonstrated that bundled interventions decreased nosocomial respiratory infections, the contribution of oral care to the results could not be determined. (Level IV)
- To date, no data have been published from large, well-controlled clinical trials of oral care interventions in critical care patients other than chlorhexidine studies. There are limited clinical reports of infection rates before and after changes in oral care procedures but these reports have not been published in refereed journals. Whereas some reports have shown a positive effect, the role of oral care in reducing nosocomial pneumonia is not clearly established by such projects, and it is possible that other changes in care occurred in the units and affected the results.

What You Should Do:

- Ensure that your unit has written practice documents such as a policy, procedure or standard of care that describes the oral care procedure.
- Document frequency of oral care differentiating between comprehensive oral care (including brushing) and oral cavity moisturizing.

- Include the oral care procedure as part of unit orientation to ensure consistency of care.

Need More Information or Help?

- Talk with a clinical practice specialist for additional information / assistance at www.aacn.org/prn

AACN Grading Level of Evidence

Level I:	Manufacturer's recommendations only
Level II:	Theory based, no research data to support recommendations; recommendations from expert consensus group may exist
Level III:	Laboratory data, no clinical data to support recommendations
Level IV:	Limited clinical studies to support recommendations
Level V:	Clinical studies in more than 1 or 2 patient populations and situations to support recommendations
Level VI:	Clinical studies in a variety of patient populations and situations to support recommendations

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