

# Happy to Be HAP-Free: The Role of Oral Care in Preventing Hospital-Acquired Pneumonia in Non-Ventilated Patients

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**HOSPITAL-ACQUIRED PNEUMONIA (HAP)** remains one of the most common and potentially fatal hospital-acquired infections. While considerable progress has been made in reducing ventilator-associated pneumonia (VAP) through the implementation of policies, bundles, and surveillance programs (Centers for Disease Control and Prevention, 2024), non-ventilator hospital-acquired pneumonia (NV-HAP) continues to be overlooked. NV-HAP, a serious yet underrecognized nosocomial infection, has similar mortality rates to VAP and accounts for up to 7% of all hospital deaths (Jones et al., 2023).

One critical yet often neglected factor contributing to NV-HAP is poor oral hygiene. While oral care is

a well-established component of VAP prevention in critical care settings, its importance diminishes once patients transition to less intensive care units. Research indicates that 60.5% of patients who developed NV-HAP had no recorded oral care in their electronic health records (Kozub et al., 2024). This lack of oral hygiene allows for colonization of respiratory pathogens in dental plaque, which, when aspirated into the lungs, increases the risk of NV-HAP. Proper oral care, therefore, serves as an essential preventative measure.

## IDENTIFYING AT-RISK PATIENTS

While ambulatory patients can independently maintain oral hygiene, certain groups require assistance. High-risk populations

include patients who are NPO, have dysphagia, dementia, motor deficits, muscle weakness, or decreased alertness. Many hospitalized patients also present with pre-existing dental issues or inadequate oral hygiene, further increasing their vulnerability. Recognizing at-risk patients and coordinating oral care efforts between nurses and nurse assistants is critical in reducing NV-HAP incidence.

## BARRIERS TO EFFECTIVE ORAL CARE

Multiple barriers hinder the implementation of effective oral hygiene practices in non-ventilated patients (Kozub et al., 2024; Curtin et al., 2023). Studies highlight a persistent gap in knowledge and confidence regarding oral care among nursing staff. One study found that implementing an oral hygiene education program for nursing assistants significantly reduced NV-HAP incidence rates ( $p < 0.001$ ), while also improving knowledge, attitudes, and behaviors related to oral care (Kozub et al., 2024). Additional barriers include time constraints, limited resources, staffing shortages, and a lack of institutional emphasis on oral hygiene as a standard of care (Curtin et al., 2023). Addressing these barriers through structured education and policy changes can lead to measurable improvements in patient outcomes.

## THE PATH FORWARD

Reducing NV-HAP begins with recognizing the critical role of oral care in patient safety. By identifying gaps in knowledge and attitudes,

healthcare providers can work toward integrating oral hygiene into routine patient care. Increased awareness, education, and institutional support are necessary to ensure that all

patients receive the essential care needed to remain HAP-free and healthy (Munro et al., 2020). 🔥

## Test Your Knowledge

Assess your oral hygiene knowledge with this quiz based on the 2024 study by Kozub et al. in the *Journal of Nursing Scholarship*.

**1. How often should oral care be performed for a patient who is NPO or receiving tube feeding?**

- a. Zero times per day
- b. Once per day
- c. 2–3 times per day
- d. 4 times per day

**2. What areas of the mouth should be cleaned during oral care?**

- a. Teeth only
- b. Teeth and gums
- c. Teeth and tongue
- d. Tongue and gums
- e. All of the above

**3. Dental plaque serves as a reservoir for respiratory pathogens.**

- a. True
- b. False

**4. Which factors increase a patient's risk of developing NV-HAP? (Select all that apply)**

- a. BiPAP usage
- b. NPO status
- c. Tobacco use
- d. Dysphagia
- e. Anemia

**5. Soaking dentures in denture cleaner (e.g., Efferdent) is sufficient for denture care.**

- a. True
- b. False

**6. Patients can safely sleep with their dentures in place.**

- a. True
- b. False

### Answer Key

C

Rationale: NPO patients and patients receiving tube feedings should receive oral care at the same frequency, if not more often, than the standard recommendation of two times per day.

E

Rationale: All areas of the oral cavity should be cleaned when performing oral care, including the teeth, gums, and tongue.

A

Rationale: Dental plaque contains bacteria that can be aspirated into the oropharynx, causing respiratory disease.

A, B, C, D, E

Rationale: BiPAP, NPO status, tobacco use, dysphagia, and anemia are all risk factors for NV-HAP. Positive pressure ventilation can force colonized secretions into the airway, and other factors that negatively affect the oral mucosa can increase the risk of NV-HAP.

B

Rationale: Dentures, like teeth, can accumulate dental plaque and must be brushed daily.

B

Rationale: Dentures must be removed before sleeping to allow the gums to rest.

### References

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