



# Oral Care Performance Improvement Project

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## Introduction

**Background:** 70% of hospitalized patients do not receive routine oral care. In 2013, non-ventilated hospital acquired pneumonia (NV-HAP) accounted for 60% of HAP at a cost of \$40,000/patient. Oral care projects implemented by Salem VA community-based nursing care facility reduced the incidence of NV-HAP on one unit by 92% saving 2.4 million dollars and Michael E. DeBakey VA CCU/PCU reduced to 0/1000 hospitalized patients over six-months, accounting for a cost avoidance of \$480,000.

**Review of Problem:** Seven NV-HAPs were reported (1 CCU, 6 Medical/Surgical) from March 2018 to February 2019 at VAPORHCS. Routine oral care was not a standard of practice nor was there a standardized method of charting completion of oral care. Oral care supplies were not stocked by central supply, but by voluntary services on a PRN basis, resulting in a less than optimal availability of supplies and no standardized inventory management.

## Objectives

1. Reduce non-ventilated hospital-acquired pneumonia (NV HAP) by promoting routine oral care for inpatients.
2. Provide education to nursing staff and patients regarding importance of routine oral care.
3. Create nursing documentation template for oral care completion.
4. Use existing automated dispensing cabinets to create a coordinated method for inventory control and timely restocking of oral care supplies.

**Oral Care for Prevention of Hospital Acquired Pneumonia**

- Only about 30% of hospitalized patients receive oral care
- Germ from plaque can get into the lungs and cause pneumonia
- Plaque removal by brushing prevents cavities, gum disease, and pneumonia
- Toothbrushing at least **twice daily** (every 8-12 hours) is recommended (for patients with full dentures, provide oral care daily)
- Determine if oral care supplies are needed during patient belongings inventory

**Products Stocked in Omnicell's**

- Soft bristle Toothbrush
- Suction toothbrushes
- Toothbrush caps
- Denture cleansing tabs
- Toothpaste
- Lip balm
- Alcohol free mouthwash

Aspiration Risk	Level of Independence	Dentition
<ul style="list-style-type: none"> <li>Oropharyngeal dysphagia history?</li> <li>Is a dysphagia screen needed?</li> <li>Aspiration risk warning note?</li> <li>Aspiration precautions implemented?</li> </ul>	<ul style="list-style-type: none"> <li>Independent</li> <li>Partial assistance</li> <li>Full assistance</li> </ul>	<ul style="list-style-type: none"> <li>Natural teeth</li> <li>Dentures (upper and/or lower)</li> <li>Partial(s)</li> </ul>

**Oral Care Considerations**

**Foam Swabs**

- Foam swabs are single use only.
- They should be thrown away after each use.
- Designed to brush gums when no dentition is present.

**Replace Yankauer & suction tubing every 24 hours if used!**

**Document completed oral care**

- Educate patients on the importance of oral care and pneumonia prevention

## Methods

This project replicated an oral care VHA Diffusion of Excellence intervention. The framework for implementation was provided by the Preventing Non-Ventilator Associated Hospital-Acquired Pneumonia Implementation Guide (March 2018). Phase 1 (initiated March 2019) included Critical Care and two medical/surgical units. Phase 2 (initiated June 2019) included the three remaining medical/surgical units. The project team collaborated with supply to identify needed supplies and vendors and develop a procurement, distribution, and storage plan. Charting practices were evaluated on each unit. Standardized charting templates were developed and implemented. Registered nurses and nursing assistants attended 30 minute in-services focused on the significance of routine oral care to prevent NV-HAP, routine oral care technique, and documentation requirements. Measures of success include pre and post intervention assessment tools evaluating nursing staff receptiveness, and NV-HAP rates.

The voluntary baseline assessment conducted during phase 1 (Critical Care and 2 medical/surgical units) provided the following:

- Top 2 reported barriers: Lack of time (65%; n= 54) and lack of resources (41%; n= 34)
- Most staff were receptive to providing oral care once per shift: RNs: 73% (n=66) and NAs: 75% (n=20)
- Priority level of oral care: 52% (n=45) rated as low priority
- Majority of nursing staff reported using foam swabs to provide oral care: medical/surgical unit 8D: 93.75% (n=32); medical/surgical unit 9C: 92.85% (n=28); CCU: 79.31% (n=29)
- How many times per shift do you provide oral care: 21% (n=18) reported not at all

### Improving Oral Hygiene to Prevent Hospital-Acquired Pneumonia

**SITUATION:**

- VA Portland Health Care System: Non-Ventilator Hospital Acquired Pneumonia (NV-HAP) data:

**BACKGROUND:**

- Thick plaque forms on teeth if a person doesn't brush regularly.
- Plaque is a sticky film filled with germs which forms every day on the teeth.
- Daily removal of plaque by tooth brushing is essential to prevent:
  - cavities,
  - gum disease,
  - mouth pain,
  - respiratory diseases.
- Germ from plaque can get into the lungs and cause pneumonia (PNA).

- Only 30% of patients receive oral care.
- NV-HAP accounts for > than 60% of HAP.
- HAP cost per patient = \$40,000.

**ASSESSMENT:**

- Oral care considerations:
  - Aspiration risk/oropharyngeal dysphagia.
  - Level of independence: independent, partial assist, full assist.
  - Dentition: natural teeth, partial(s), dentures.

**RECOMMENDATIONS & FUTURE PRACTICE:**

- Brushing teeth at least twice daily (every 8 – 12 hours) is a way to keep our patients healthy.
- Assisting a patient with oral care – diagram:

**REMEMBER:**

- Hand hygiene!
- Use a pea-sized amount of toothpaste.
- For aspiration risk patients:
  - elevate head of the bed (HOB) at 90° (side lying is an alternative if elevating HOB is not tolerated).
  - use a suction toothbrush and brush for 2 minutes using water only.
  - do not use toothpaste/mouthwash.
- Dispose of the suction toothbrush and the foam swab after each use.
- Patient declines oral care? Try again later.
- Allow supplies to air dry after use; store in a dry/clean place; label patient's supplies.
- Clean dentures and partials daily; soak in tap water overnight.
- Educate patients about oral care and PNA prevention.
- Oral Care: Non-ventilated Patients Procedure can be viewed on VAPORHCS Intranet home page under the "Nursing Policies and Procedures" section.
- Document oral care in Shift Assessment.

**Oral care supplies are stocked in Omnicell!**

- Soft bristle toothbrush
- Suction toothbrush
- Toothpaste
- Toothbrush cap
- Denture cleansing tabs
- Lip balm
- Alcohol free mouthwash

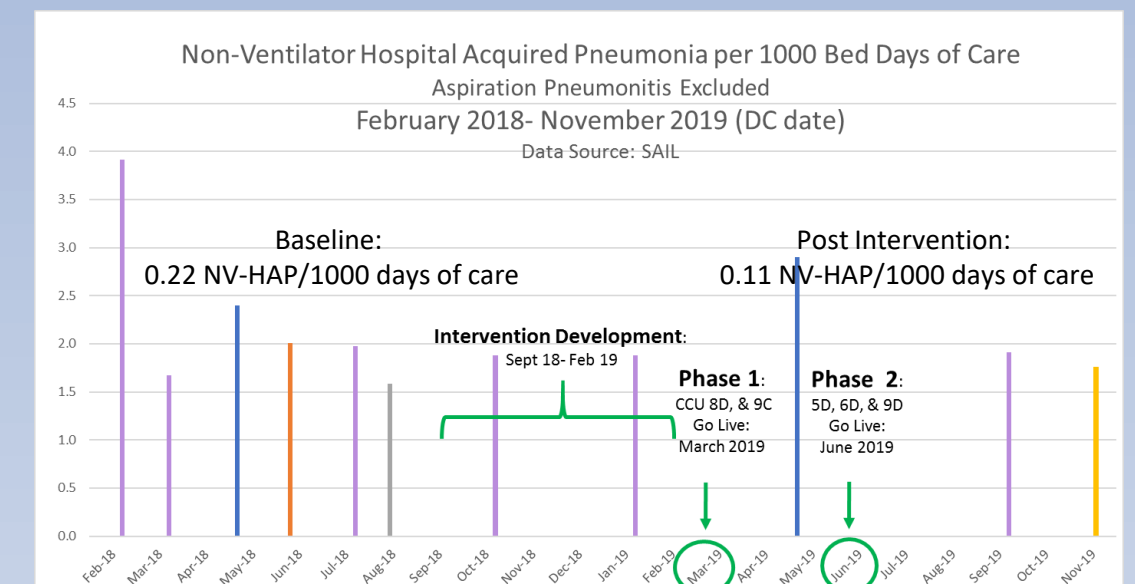
**Patient education pamphlets are provided in admission packet.**

U.S. Department of Veterans Affairs. Preventing Non-Ventilator Associated Hospital – Acquired Pneumonia (NV – HAP) by Engaging Nurses to Complete Inpatient Oral Care: Implementation Guide (March 7, 2018)

## Results

During the 12 months prior to phase 1 implementation (March 2018–February 2019), 7 NV-HAP occurred (CCU=1; medical/surgical units =6), a rate of 0.2 NV-HAP per 1000 days of care. Post implementation (phase 1=5 months; phase 2=2 months) decreased to an overall rate of 0.1 NV-HAP per 1000 days of care.

Pre-intervention 38% (n=43) of staff reported oral care as a low priority, post-intervention this reduced to 26% (n=24). Additionally, there was a 27% reduction in staff reporting lack of resources as a barrier to oral care.



## Conclusions

The early findings of this quality improvement project demonstrate a reduction in the NV-HAP of 50%. This is similar to the decreased rates described at other facilities.

About 50% of the NV-HAP fallouts reviewed were actually aspiration pneumonia leading us to implement a separate project focused on aspiration prevention.

## References

Diffusion of Excellence: Diffusing Best Practices Across VHA. Preventing Non-Ventilator Associated Hospital-Acquired Pneumonia (NV-HAP) by Engaging Nurses to Complete Inpatient Oral Care Implementation Guide (March 7, 2018).

## Acknowledgements

This project was reviewed by VA Portland Health Care System Research and Development and is considered to be non-research VHA operations activity.

We would like to acknowledge VAPORHCS Supply Chain Management and VAPORHCS Dental Service for their outstanding project support.

This material is the result of work supported with resources and the use of facilities at the VA Portland Health Care System.

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## Contact Information

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